

U. S. DEPARTMENT OF COMMERCE
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WEATHER BUREAU
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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JANUARY 1955

Volume 6 No. 1



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NOTE.--This publication contains all of the climatic data formerly printed in the MONTHLY WEATHER REVIEW.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 6 No. 1

JANUARY 1955

GENERAL SUMMARY OF WEATHER CONDITIONS

The month was relatively mild from the north Pacific Coast eastward to the Great Lakes, and thence southward over the Great Plains, and in northern New England, and slightly colder than normal elsewhere. Temperature extremes were well within the limits of former records. Precipitation, above normal in much of the far Southwest, the extreme Southeast, and a belt extending from Wyoming to Illinois, was below normal elsewhere with outstanding deficiencies in the New England and Middle Atlantic States, the Virginias, Kentucky, Tennessee, and Arkansas. In the western Great Plains, a few sections received beneficial moisture, but generally there was little improvement in the drought situation. Over most of the South the increase of ground water and streamflow was about normal for January, but both were still low in most sections at the end of the month. The distribution of snowfall was extremely uneven ranging from little or none in the northwestern Great Plains to many times the normal amounts in some sections of the Southeast. Most snowstorms were not accompanied by drifting winds, and consequently caused little interference to transports. In the far West the mountain snowpack, generally below normal, was beginning to cause apprehension in some sections regarding water supplies for the coming crop season. Snow covered the ground in most of the main Wheat Belt during a period of subzero temperatures late in the month, and was plentiful during most of the month in the winter sports areas of the Appalachians. Sunshine was abundant in the Northeast setting new records for January at a number of stations including Albany, N. Y., (62 percent of possible), Portland, Maine, (71 percent of possible), and New Haven, Conn., (73 percent of possible), and about normal elsewhere except in the far Northwest where it was considerably below normal. Thunderstorms were generally limited to scattered stations in the Gulf States and along the southern California coast; Galveston, Texas, reported 4, and Los Angeles, Calif., 3.

PRECIPITATION.--Precipitation averages for Virginia, New England, and all the Middle Atlantic States were the lowest on record for January. For Maryland the average of 0.55 inch was 17 percent of normal and for Delaware the average of 0.58 inch was 16 percent. Harrisburg, Pa., had a total of 0.70 inch, the least amount for January during a 110-year record. At Providence, R. I., January totals of less than 0.78 inch (this month's record for the station) were recorded only in 1839 and 1843. Owing to generous precipitation in preceding months no serious moisture shortages developed in these states despite the scanty amounts in January.

Near normal precipitation over the South maintained ample topsoil moisture and increased subsoil moisture although the latter at the end of the month was still below normal in many sections. Water supplies for some of the small towns in northern Florida remained very low; water in the key well at Tallahassee was at a record low level

for the fifth consecutive month.

In the western portions of the Great Plains where drought has persisted with only short intervals of temporary relief for the past 3 years, January precipitation was again generally below normal. Less than 50 percent of the normal amounts fell in a belt extending from south-central and southeastern Montana southward through western and central Wyoming, eastern Colorado, extreme southwestern Kansas, the Panhandle areas of Oklahoma and Texas, and northeastern New Mexico; and some sections of this area received no precipitation at all. During the third and fourth weeks some soil erosion occurred in north-central Wyoming, eastern Montana, and eastern Colorado. West Texas received above-normal amounts of precipitation, many stations reporting over an inch, but much of this moisture was evaporated by drying winds during the last week.

In the far Southwest rainfall totals, which ranged from 1 to over 4 inches in southern California and from 1 to over 3 inches in most of Arizona, were very beneficial for crops and replenished moisture supplies.

TEMPERATURE.--East of the Rocky Mountains the first week of January was unusually warm, and average departures from normal exceeded 10° in the central Mississippi and lower Ohio Valleys and lower Appalachians. Virtually all stations in this area recorded their monthly maximum during this period. The maximum for Texas, 90°, was also the monthly maximum for the Nation. Following this first week the month became progressively colder, although temperatures remained above normal in the southern Great Plains and Great Lakes region until midmonth and in the northern Plains and northern New England until the last week. During this week a severe cold wave overspread the entire area east of the Rockies, bringing subzero minima southward to the central Great Plains, the Ohio Valley, and the lower Appalachians and freezing to the Gulf region and deep into Florida.

Damaging freezes occurred in Florida during the periods 12th-15th and 25th-31st. The first freeze severely damaged tender crops such as sweet corn and snap beans in the Everglades, and strawberries, peppers, tomatoes, and other tender vegetables in the Plant City-Wauchula area and caused minor losses in other areas. The latter freeze also was responsible for heavy losses of tender crops, particularly sweet corn, strawberries, and watermelons. Losses of corn, mostly in the Everglades, were estimated at 4,200 acres. The freeze on the 25th-31st also caused widely scattered mostly light crop damage throughout the Gulf coastal region and in the lower Rio Grande Valley.

In the northern Great Plains January was the third consecutive month of unusually mild temperatures. At Minneapolis, Minn., the temperature remained above zero until the 16th, the latest date on record.

In the far West above-normal temperatures persisted in the Canadian Border region during the

GENERAL SUMMARY OF WEATHER CONDITIONS—Continued

JANUARY 1955

last 3 weeks and in central and southern regions throughout the month. Highest temperatures in southern Idaho and northern portions of Utah and Nevada occurred on the 1st and in the remainder of the area during the last week. Lowest temperatures generally were recorded during the first week. The month's lowest temperature, -44° occurred at Taylor Park, Colo., on the 18th. Some frost damage was reported in the Los Angeles and San Diego areas of California and in southern Arizona during the last decade.

SNOWFALL.--The most extensive heavy snowfall east of the Rockies occurred on the 9th and 10th in belts extending from west Texas to the Great Lakes and from southern Missouri and northern Arkansas to the Atlantic Coast. Depths during this storm ranged up to 2 inches in Texas, 7 in Oklahoma, and 10 in southern Missouri and Arkansas. Several inches fell in Kentucky accounting for the heaviest January fall there since 1948. Several inches also fell in Virginia.

Another storm deposited 15 inches at Abingdon, Va., and several inches in other parts of the State. The storms of the 9th-10th and 19th accounted for a record monthly total of 13.8 inches at Norfolk, Va., and a statewide average of over 300 percent of normal. North Carolina was in the southern portion of the storm of the 19th, and

some sections of the State received as much as 10 inches which covered the ground for several days.

The most unusual snowfall of the month occurred in southwestern Alabama where Mobile and Bay Minette measured 3.5 inches on the 23d.

Light snowfall or flurries were frequent in extreme northern areas, with slowly increasing depths of up to 20 inches in the upper Mississippi Valley and upper Great Lakes, and over 40 inches in northern Maine by the end of the month. Snow on the ground east of the Rocky Mountains at the end of the month extended southward to a line running from southern Nebraska to the Appalachians, covering large areas that were bare at the beginning of the month.

DESTRUCTIVE STORMS.--The month was notable for the absence of severe storms. Only two storms caused damage of \$10,000 or more, a tornado-like wind in Los Angeles, Calif., on the 18th which caused damage of \$10,000, and a windstorm in Charleston County, S.C., on the same date which damaged aircraft utility lines, and poles to the extent of \$11,500. Total damage for the month was only slightly over \$30,000. Not a single death or injury attributed directly to storms was reported, although a few deaths and many injuries occurred in accidents caused by slippery roads.

CONDENSED CLIMATOLOGICAL SUMMARY

Table 1

JANUARY 1955

Section	Temperature										Precipitation									
	Monthly extremes					Monthly extremes					Monthly extremes									
	Average	Departure from normal	Station	Highest	Date	Station	Lowest	Date	Average	Departure from normal	Station	Greatest	Station	Least						
Alabama	44.8	-2.1	Headland	84	4	Russellville 2	8	29+	4.36	-0.65	Pimrose Farm	6.88	Waterloo	.178						
Arizona	37.7	-2.8	Tumacacori NM	82	30	Maverick	-23	22	1.83	.84	Junipine	5.43	Kayenta	.21						
Arkansas	41.5	.5	Ashdown	78	5	2 Stations	5	29	1.60	-2.69	Arkansas City	4.00	St. Francis	.52						
California	40.6	-3.2	Yorba Linda	88	27	Soda Springs	-16	4	3.72	-.26	Sierra City	12.35	Cow Creek	.19						
Colorado	22.4	-.9	Bonny Dam	69	17	Taylor Park	-44	18	.55	-.38	Wolf Creek Pass 4W	5.15	3 Stations	.00						
Connecticut	25.4	-1.6	Stamford	52	2	Falls Village	-7	30	.78	-3.02	Middletown 4W	1.16	Putney Lake	.44						
Delaware	32.8	-2.3	Selbyville	65	6	Newark College Farm	6	28	.58	-2.95	Middletown 2S	.93	Wilmington City Hall	.33						
Florida	58.0	-1.2	3 Stations	87	1+	2 Stations	18	14+	2.64	-.04	Tallahassee WB AP	5.21	Royal Palm Ranger Sta.	.22						
Georgia	46.4	-1.9	2 Stations	80	4+	Blairstown Exp. Sta.	0	31	4.44	.38	Talbotton	7.50	Savannah Beach 2N	2.24						
Idaho	20.1	-3.4	2 Stations	52	24+	Chilly Barton Flat	-32	5	1.13	-.88	Pierce RS	3.74	Obidian 4NNE	.24						
Illinois	28.3	.6	Harrisburg	68	5	3 Stations	-18	27	1.80	-.53	Lawrenceville	3.72	2 Stations	.39						
Indiana	28.0	-.7	Evansville WB AP	67	5	Winamac	-18	27	2.08	-.92	Spencer	3.82	Kokomo Post Office	.54						
Iowa	21.0	1.3	Missouri Valley	56	2	Atlantic 1NE	-26	27	.93	-.08	Donnellson 4N	3.52	Waukon	T						
Kansas	32.0	1.7	Johnson 11ESE	71	4	2 Stations	-9	19+	.86	.20	Hawatha	2.79	2 Stations	.04						
Kentucky	34.4	-1.7	Hickman 1E	70	5	Somerset 1N	-3	29	1.75	-2.80	Mount Sterling	3.18	Ford's Ferry Dam 50	.30						
Louisiana	50.5	-1.2	2 Stations	83	2+	4 Stations	15	29+	5.22	-.42	New Orleans Audubon	9.22	Rodessa	2.62						
Maine	17.6	.4	Portland	42	2	Houlton CAA AP	-27	31	1.52	-1.82	Fort Fairfield	3.39	Gilead	.59						
Maryland	32.6	-1.0	Solomons	66	6	Oakland 1SE	-26	28	.55	-2.76	Sines Deep Creek	2.56	2 Stations	.16						
Massachusetts	25.9	-.7	Provincetown 3N	54	2	Stockbridge	-8	30	.85	-2.82	Pittsfield WB AP	1.22	Lawrence	.57						
Michigan	21.3	1.2	Coldwater State Sch.	49	5	Kenton U S Forest	-27	30	1.41	-.39	Houghton CAA AP	4.91	Standish	.46						
Minnesota	10.4	1.6	2 Stations	42	3	3 Stations	-36	27	.54	-.21	Hibbing Pwr Substa	1.44	2 Stations	.12						
Mississippi	45.6	-2.0	4 Stations	79	4+	2 Stations	11	29	4.31	-.92	Buckettunne	7.47	Lake Cormorant	1.63						
Missouri	33.0	2.2	Doniphan	76	4	2 Stations	-17	27	1.21	-1.11	Memphis	84.34	Pierce City	.21						
Montana	20.3	1.8	Shelby	59	30	Wisdom	-37	5	.45	-.28	Kings Hill	3.05	3 Stations	.00						
Nebraska	23.7	4.2	2 Stations	63	2	Walthill	-21	27	.62	-.08	Falls City	2.20	Butte	T						
Nevada	24.4	-6.3	Las Vegas	67	31	2 Stations	-26	8	1.00	-.06	Pioche	3.59	Lebonant Dam	T						
New Hampshire	18.9	-.4	Keene	44	1	2 Stations	-21	29	.92	-2.08	Cannon Mountain	3.29	South Ware 1SE	.51						
New Jersey	29.6	-1.5	Millville CAA AP	59	2	Leyton 3NW	-4	30	.72	-2.87	Peterson	2.05	2 Stations	.25						
New Mexico	32.4	-1.3	6 Stations	73	30+	Gavilan	-38	22	.63	-.01	Elks Ranch	2.40	Ribera	.00						
New York	20.1	-2.5	Hempstead Malverne	54	2	Old Forge	-38	28	1.15	-1.68	Pulaski	3.31	Schroon Lake	.14						
North Carolina	39.8	-2.6	2 Stations	78	4+	Banner Elk	-4	31	2.63	-1.04	McKinney Gap	5.00	Danbury	.81						
North Dakota	11.2	4.3	3 Stations	46	30	Pembina 2N	-33	27	.41	-.07	Kenmare	.99	Verona	.03						
Ohio	28.1	-1.1	Barnesville Wtr. Wks.	65	2	Mansfield 6W	-14	26	1.69	-1.27	Kings Mills	2.83	Philo 3SW	.68						
Oklahoma	40.1	2.1	Burkburnett	77	3	Kenton	1	23	1.05	-.51	Anedarko	2.56	Texhoma	.00						
Oregon	30.7	-1.0	Sitkum 6W	69	26	2 Stations	-16	3+	2.25	-1.63	Illane 1N	11.72	OO Ranch	.13						
Pennsylvania	26.4	-2.2	2 Stations	63	1+	Ridgeway 3W	-20	28+	1.03	-2.14	Custer City 2W	3.85	Artemas 1NNW	.13						
Rhode Island	26.0	-1.7	2 Stations	49	2	Kingston	-3	30	.78	-3.18	Kingston	.83	Austin	.42						
South Carolina	44.4	-1.9	Yemassee 4W	80	6	Chester 2SW	12	14	4.20	.76	Batesburg	5.99	Cleveland 2NNW	2.15						
South Dakota	20.8	3.7	Murdo 1W	65	2	La Delle 7NE	-27	27	.22	-.33	Dumont 2ENE	2.22	Numerous	T						
Tennessee	38.0	-1.4	Moscow	74	5	Centerville Sub Sta.	0	29	2.00	-3.09	Rocky River	3.13	Samburg W.L. Refuge	1.12						
Texas	46.9	.0	La Pryor	90	2	2 Stations	4	22	1.55	-.05	Eadsdale	9.05	3 Stations	.00						
Utah	20.0	-4.8	3 Stations	60	3+	Woodruff	-26	8	1.48	.31	Alt.	211.83	Hite	.08						
Vermont	14.2	-3.7	Bellows Falls	43	1	Lemington	-23	29+	.99	-1.77	Mount Mansfield	1.74	Essex Junction	.44						
Virginia	34.7	-2.0	2 Stations	74	6+	2 Stations	-6	28+	1.19	-2.09	Jewell Ridge	3.34	Washington	.16						
Washington	32.0	1.2	Packwood	60	30	Stockdill Ranch	-6	4	2.44	-1.93	So. Olympic Tree Farm	10.51	Prosser 4NE	.31						
West Virginia	30.4	-2.7	2 Stations	67	6	Bayard	-24	28	1.94	-1.70	Lookout 2	5.87	Romney 3NN	.14						
Wisconsin	15.2	.9	4 Stations	45	1+	Danbury	-36	27	.60	-.64	Gurney	1.38	2 Stations	.03						
Wyoming	19.2	.6	Torrington Exp. Sta.	66	2	Bondurant	-41	7	.54	-.30	Moose 3NW	2.68	2 Stations	.00						
Puerto Rico	72.5	-.3	Juan Diaz Camp	93	27	Cayey (2)	49	17	1.97	-1.87	Toro Negro Resrv.	12.57	Gusyabai Reser. (6)	.00						

* And also on a later date or dates.

E Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch of water equivalent to every 10 inches of new snowfall.

Note: Dates in Table 1 apply to the period 24 hours prior to time of observation shown. (See individual Climatological Data for times of observations). In some cases the actual occurrence is on the calendar date preceding.

CLIMATOLOGICAL DATA

Table 2

JANUARY 1955

State and station	Pressure			Temperature												Precipitation						Wind			No. of days (sunrise to sunset)								
				Average maximum						Departure from normal						Average relative humidity			No. of days			Snow, Sleet, Hail			Fastest mile								
	Elevation (ground)	Station	Sea level													Total	Departure from normal	Greatest in 24 hours	With thunderstorms	Total	Max. depth on ground	Pervailing direction	Speed	Date	Clear	Partly cloudy	Cloudy	Sky cover, tenthis (sunrise to sunset)	Possible sunshine				
ALABAMA																																	
Birmingham	610	994.4	1020.2	54	33	43.5	-1.7	74	5	19	20+	0	16	32	68	4.70	-0.28	1.26	11	0	T	0	6.6	N	41	E	18	7	10:14	0.3			
Mobile	211	1012.2	1020.5	52	40	50.5	-2.1	74	4	28	14	0	9	43	75	3.35	-1.67	1.75	9	0	3.5	0	10.4	N	22	10	8	16	6.4				
Montgomery	198	1012.9	1020.6	56	36	46.2	-3.0	76	5	23	14	0	13	39	78	4.63	-0.03	1.15	10	1	T	0	6.6	N	34	W	10	7	16	0.4			
ARIZONA																																	
Flagstaff	6993	863.8	863.8	36	8	22.2	-3.1	55	29	-15	22	0	31	-	-	2.67	.98	.89	12	0	44.3	25	-	-	-	-	13	414	5.5	--			
Phoenix	1114	978.7	1018.6	59	38	48.7	-1.0	74	28	29	23	0	4	37	68	2.41	1.81	.71	8	0	0.0	0	4.6	E	*21	NE	22	13	5.1	5.5			
Prescott	5014	846.6	1019.0	44	21	32.6	-2.7	61	29	11	12	0	30	-	-	1.11	.01	.33	8	0	11.9	5	4.9	SSN	*28	NW	22	10	7	14	5.7	63	
Tucson	2558	927.5	1017.6	59	34	46.7	-3.0	77	29	25	22	0	16	29	58	1.89	1.26	.75	9	0	0.0	0	6.4	S	*29	SE	2	16	3.12	4.7	77		
Winslow	4880	852.0	1019.6	44	20	31.8	-9	59	30	7	23	0	30	16	58	.34	-.03	1.5	7	0	1.7	1	7.3	SE	*32	W	31	13	7	11	5.0	--	
Yuma	199	1013.2	1018.5	63	41	52.0	-3.3	75	28	34	9	0	0	32	53	1.39	.96	.56	8	0	0.0	0	5.9	N	31	N	22	17	5	9	4.3	75	
ARKANSAS																																	
Fort Smith	458	1002.7	1020.1	51	31	41.0	-1.0	72	3	14	29	0	18	32	73	1.51	-1.38	.73	5	0	5.5	2	6.4	ENE	*24	SW	31	9	6	16	6.0	50	
Little Rock	257	1006.8	1020.3	52	33	42.5	-1.9	72	7	24	15	29	0	16	30	64	1.49	-3.63	.60	9	0	0.5	1	9.2	S	*33	NW	24	5	8	18	7.0	42
Texarkana	361	1006.4	-----	54	36	45.0	-1.9	72	4	19	29	0	12	--	--	2.36	-2.74	.82	10	0	0.0	0	--	--	--	--	--	--	--	--			
CALIFORNIA																																	
Bakersfield	489	1003.1	1021.6	53	36	44.7	-2.2	71	30	26	8	0	5	39	81	1.51	.49	.70	8	0	0.0	0	4.2	NW	*23	NNW	1	5	6	20	7.5	--	
Bishop	4108	876.1	1021.3	45	9	27.2	-10.7	58	27	-6	20	0	31	-	-	1.81	.69	.77	4	0	20.0	9	--	--	--	--	11	7	13	5.6	--		
Blue Canyon	5260	837.5	1020.0	46	26	33.4	-2.8	61	26	+19	2	0	23	-	-	7.89	1.28	.07	14	0	67.3	37	--	--	--	--	11	5	15	5.8	--		
Burbank	699	992.6	1018.9	62	40	50.7	-1.9	78	29	33	4	0	0	30	61	4.37	2.02	.37	11	2	T	5.4	S	*35	NNW	16	10	9	12	5.5	--		
Eureka CO	43	1018.6	1021.0	56	38	44.2	-3.0	58	26	+32	6	0	2	-	-	5.73	-4.72	.20	17	2	T	6.6	--	--	--	54	S	17	8	30	2.9	52	
Fresno	331	1008.8	1021.0	49	34	41.6	-3.1	59	23	26	8	0	14	38	89	3.51	1.94	1.13	9	0	0.0	0	5.0	SE	*27	SE	18	2	8	21	8.2	37	
Los Angeles CO	312	1015.2	1019.0	62	45	53.7	-1.3	79	28	40	20	0	0	36	60	4.30	1.92	1.15	9	0	0.0	0	6.9	--	--	--	36	E	6	10	4.9	66	
Los Angeles	99	1015.2	1019.0	61	43	52.0	-1.2	80	28	37	26	0	0	36	65	4.12	2.11	1.19	10	2	T	6.8	W	*42	NW	16	11	10	10	4.9	--		
Mt. Shasta	3541	894.3	1021.7	41	31	-	-1.6	56	28	34	3	0	29	-	-	3.29	-1.25	1.66	12	0	41.6	24	--	--	--	--	6	18	5.9	--			
Oakland	3	1020.7	1021.1	52	37	44.2	-3.0	59	26	31	4	0	5	36	81	4.14	.84	.08	12	0	0.0	0	4.9	SE	*32	NNE	6	11	6	14	5.8	--	
Red Bluff	341	1008.5	1021.3	52	34	42.7	-2.4	67	26	27	4	0	11	33	73	2.96	-.77	1.15	11	0	3.3	3	8.6	NNW	41	SE	17	11	5	15	5.6	50	
Sacramento	17	1020.0	1020.9	49	35	42.0	-2.3	59	1	28	8	0	10	37	84	2.87	.21	.75	14	0	0.0	0	8.7	SE	43	S	17	6	32	2.3	35		
Sanberg	4517	862.9	1019.3	40	31	35.1	-4.7	52	25	23	7	0	22	-	-	3.73	1.43	.29	10	0	32.4	13	--	--	--	--	11	8	12	5.7	--		
San Diego	19	1015.6	1018.6	62	46	53.9	-1.0	80	28	40	9	0	0	41	65	3.59	1.90	1.31	15	0	0.0	0	6.0	NE	39	SW	18	13	7	11	5.0	67	
San Francisco CO	52	1020.0	1020.6	52	38	44.9	-3.0	59	22	39	14	0	0	0	0	4.05	.02	1.07	12	1	0	0	6.6	--	26	E	38	13	8	10	5.0	66	
Santa Maria	238	1010.8	1019.8	56	35	46.8	-3.6	76	26	28	6	0	10	37	72	4.41	1.70	1.34	10	1	T	5.8	W	*26	W	17	1	13	5.1	--			
COLORADO																																	
Alamosa	7538	768.7	1023.1	36	-1	17.7	.8	47	3	18	23	0	3	--	--	.06	-.17	.04	3	0	.3	1	--	--	--	--	13	11	7	4.4	--		
Colorado Springs	6173	806.5	1015.4	41	14	27.3	-1.6	54	2+	1	10	0	3	11	56	.29	.07	.13	4	0	5.2	2	9.4	NNE	*35	NW	6	15	9	17	4.3	--	
Denver	5292	834.7	1017.5	39	16	27.2	-1.5	55	13	5	9	0	31	13	58	.23	-.27	.19	4	0	3.5	3	8.5	S	*32	W	23	13	10	9	4.6	71	
Grand Junction	4849	861.5	1023.7	32	16	23.9	-1.1	46	4	32	22	0	31	17	75	.61	-.01	.38	9	1	4.3	2	5.8	NW	29	W	4	10	7	14	5.8	51	
Pueblo	4639	854.7	1017.7	45	15	29.8	.4	60	4	1	22	0	31	15	59	.11	-.27	.10	2	0	1.2	1	6.6	E	30	N	11	11	9	14	4.9	68	
CONNECTICUT																																	
Bridgeport	7	1013.7	-----	36	23	29.2	.0	49	2	10	28	0	29	--	--	.51	-2.92	.25	6	0	1.3	1	--	--	--	15	9	7	4.3	--			
Hartford	169	1007.5	1013.6	34	19	26.1	-.9	44	4+	5	30	0	30	13	61	.91	-2.24	.43	5	0	1.2	1	11.6	NW	42	W	7	11	10	10	5.0	59	
New Haven	6	1009.2	1013.5	36	22	28.6	-.5	47	3+	9	30	0	29	--	--	.63	-3.26	.29	7	0	1.6	1	7.8	--	--	26	NW	20	13	10	9	4.8	73
DELAWARE																																	
Wilmington	73	1012.8	1016.1	39	24	31.5	-1.8	58	2	10	28	0	26	20	64	.59	-2.97	.23	6	0	3.8	2	9.3	NN	--	--	--	7	10	14	6.3	--	
DIST. OF COLUMBIA																																	
Washington CO	72	-----	42	29	35.4	-1.1	62	2	12	28	0	23	--	--	.30	-3.11	.12	7	0	1.7	1	8.1	--	--	31	NN	6	--	--	--	--		
Wash. Nat'l. AP	14	1013.0	1017.4	42	29	35.4	-.8	63	2	12	28	0	24	21	57	.31	-2.93	.11	8	0	2.3	1	10.7	NW	43	NN	27	7	9	15	6.5	45	
FLORIDA																																	
Apalachicola CO	13	-----	61	46	53.3	-1.9	75	6																									

CLIMATOLOGICAL DATA

Table 2—Continued

JANUARY 1955

State and station	Pressure			Temperature												Precipitation						Wind			No. of days (sunrise to sunset)							
				Departure from normal						No. of days			Average dew point			Greatest in 24 hours			No. of days			Snow, Sleet, Hail			Farthest mile							
	Elevation (ground)	Station	Sea level	Average maximum	Average minimum	Average	Highest	Lowest	Date	Min. 32° F. or below	Max. 80° F. or above	Average relative humidity	F. Total	In	In	01 inch or more	With thunderstorms	Total	In	M.	Max. depth on ground	Pervading direction	Speed	Direction	Date	Clear	Partly cloudy	Cloudy	Sky cover, tenths	Possible sunshine		
IOWA																																
Burlington	694	992.6	1019.4	32	15	23.6	-0.2	46	+1-15	27	0	28	17	70	3.08	1.34	2.04	13	0	10.7	7	10.7	p.b.	38	NW	26	6	7	18	6.7	57	
Des Moines	948	986.5	1019.5	30	14	21.6	-1.5	49	+3-13	27	0	31	17	83	1.35	1.12	1.55	13	0	10.7	8	14.0	p.b.	42	NW	14	9	5	17	6.6	39	
Dubuque	1065	977.3	1018.0	26	12	19.0	-4	40	+3-16	27	0	29	14	75	1.42	-0.95	1.19	10	0	3.5	4	11.1	p.b.	51	N	27	5	11	15	6.7	-	
Sioux City	1094	975.3	1018.5	32	12	22.2	3.1	52	+2-15	27	0	31	13	69	1.40	-0.34	1.17	6	0	5.4	4	14.6	p.b.	52	N	27	7	8	16	6.5	53	
KANSAS																																
Concordia CO	1375	967.2	-----	39	21	30.0	1.9	59	+3-6	27	0	30	--	67	1.24	.65	.74	6	1	6.0	4	8.1	-----	27	NW	12	13	9	9	4.5	64	
Dodge City	2594	927.5	1018.1	45	22	33.3	3.0	66	+2-6	19	0	28	23	70	1.54	.01	.38	3	1	.8	1	15.4	NW	39	N	5	11	12	5.2	70		
Goodland	3645	886.6	1017.5	37	15	26.2	-2	57	+4-3	18	0	31	19	76	.82	.51	.49	3	0	7.6	4	10.4	NW	*28	NW	14	10	11	5.7	-		
Topeka	879	982.4	1019.7	41	21	31.1	2.4	60	+3-3	27	0	28	22	72	1.34	.27	.63	7	0	4.1	4	10.6	MNN	34	NW	28	12	5	14	5.6	52	
Wichita	1321	968.5	1018.8	45	25	34.7	2.7	64	+3-11	27	0	28	26	73	1.61	-.44	.35	7	0	2.0	2	13.9	S	34	N	28	11	8	12	5.6	66	
KENTUCKY																																
Lexington	978	982.3	1019.3	40	24	32.1	-4	62	+5	1	29	0	26	25	77	1.57	-2.93	.46	15	0	9.1	3	14.2	SSW	35	-----	10	5	10	16	7.2	--
Louisville	485	1002.5	1019.3	41	26	33.6	-1.3	64	+5	29	0	24	26	75	1.80	-2.30	.49	16	0	6.0	3	9.0	SW	35	SW	24	4	8	19	6.5	32	
LOUISIANA																																
Baton Rouge	64	1017.3	1026.0	62	41	51.3	-1.1	77	+5	28	20	0	8	43	76	4.64	-.85	2.76	11	0	T	0	8.4	N	29	MNN	18	7	9	15	6.5	--
Lake Charles	12	1019.0	1026.4	61	44	52.5	-1.4	75	+5	30	24	0	9	44	78	4.55	8	1	6.0	0	8.3	N	*29	MNN	18	6	5	20	7.2	--		
New Orleans CO	9	1018.3	-----	63	46	54.4	-1.5	77	+5	34	20	0	0	--	--	6.48	1.70	4.67	8	1	T	0	6.5	-----	34	M	18	9	16	6.3	46	
New Orleans	3	1018.3	1020.4	62	44	53.2	-1.7	78	+5	30	20	0	2	46	78	7.13	2.45	4.72	9	1	T	0	9.9	M	*30	MWN	18	8	9	14	6.3	--
Shreveport	252	1010.8	1020.4	57	39	47.9	-1	75	+4	20	29	0	8	39	74	3.44	-1.28	1.67	10	1	0	0	11.0	S	30	-----	61	7	15	18	7.0	55
MAINE																																
Caribou	624	985.6	1010.1	18	4	11.3	2.6	35	+7	-26	31	0	31	5	74	2.25	.01	.47	17	0	36.5	50	11.7	NW	*44	M	28	7	4	20	7.3	--
Portland	61	1006.9	1011.1	31	14	22.3	1.6	41	+2	-1	29	0	30	13	69	2.76	-3.67	.34	8	0	4.7	2	10.9	MNW	42	M	27	12	7	12	5.3	71
MARYLAND																																
Baltimore CO	14	-----	42	28	34.9	-1.7	63	2	14	28	0	22	--	--	.33	-3.33	.11	6	--	--	1	10.7	MNN	41	NW	2	8	13	10	5.8	54	
Baltimore	146	1012.3	1017.2	40	24	32.3	-1.9	61	+2	6	28	0	27	20	63	.29	-3.37	.09	8	0	2.3	1	10.7	MNN	41	NW	2	8	13	10	5.8	54
Frederick	294	-----	40	23	31.3	-1.4	60	+2	3	28	0	27	--	--	.35	-2.53	.09	7	0	2.3	1	11.0	-----	-----	-----	-----	-----	-----	-----	-----		
MASSACHUSETTS																																
Blue Hill Obs.	629	987.2	1011.4	32	18	24.6	-1.3	44	+2	5	28	0	30	--	.61	.89	-3.20	.49	7	0	1.1	1	17.0	NW	48	M	7	12	8	11	4.8	62
Boston	1007.0	1011.9	35	22	26.5	-1.6	45	+1	10	28	0	31	13	53	.92	2.58	.62	6	0	5.9	1	16.1	M	*54	M	7	13	5	13	5.3	75	
Nantucket	43	1010.4	1011.0	35	25	30.0	-2.1	48	+2	15	28	0	29	22	72	1.21	-2.66	.55	6	0	3.0	1	14.8	MNN	41	M	27	9	16	6.2	45	
Pittsfield	1153	970.2	1014.2	27	12	19.3	-1.9	40	+1	-5	30	0	31	--	1.22	-1.88	.63	9	-	5.1	3	-----	-----	-----	-----	-----	-----	-----	-----			
MICHIGAN																																
Alpena CO	587	992.2	-----	27	16	21.8	.6	40	3	21	27	0	31	--	.13	.32	-.34	.30	16	0	17.6	12	10.3	-----	40	SS	21	0	7	24	8.2	36
Detroit	619	989.2	1017.1	32	21	26.3	.1	45	3	4	27	0	30	19	74	1.69	.39	1.12	0	2.9	2	11.2	M	40	M	15	0	9	17	7.5	31	
Detroit (Willow Run)	722	987.5	1016.9	32	19	23.3	.0	46	3	-3	29	0	30	19	76	1.76	-.02	1.00	8	0	3.0	2	11.5	WSW	*33	MWN	15	5	11	15	7.3	--
East Lansing CO	856	-----	31	19	24.6	.8	46	+3	2	27	0	31	--	1.47	-.40	.95	10	0	5.2	2	6.3	-----	-----	-----	-----	-----	-----	-----	41			
Escanaba CO	594	992.2	-----	27	13	19.6	2.1	38	+1	-7	27	0	31	--	.98	.55	1.29	8	0	11.8	10	9.9	-----	31	M	15	7	17	6.8	43		
Grand Rapids	681	990.2	1016.7	31	18	24.2	.7	43	+3	-9	30	0	30	19	81	1.70	-.20	.75	12	0	25.1	10	11.4	M	29	M	15	2	8	21	8.1	28
Marquette CO	677	987.1	-----	26	16	20.9	2.1	37	+1	-8	28	0	31	10	79	1.31	-.66	.25	21	0	18.1	12	8.7	-----	25	M	14	4	8	19	7.6	36
Muskegon	627	992.6	1016.7	30	19	24.9	.0	42	+3	2	28	0	30	16	73	2.07	-.12	.65	16	0	30.3	14	-----	-----	1	8	22	8.5	--			
Sault Ste. Marie	721	991.9	1015.7	24	10	16.7	2.9	36	+1	-15	27	0	31	12	78	1.49	-.67	.32	19	0	16.8	14	9.3	E	*29	M	26	5	5	21	7.7	32
MINNESOTA																																
Duluth	1409	973.2	1016.7	19	1	9.9	1.6	34	+1	-26	27	0	31	3	75	1.95	-.28	.29	21	0	16.2	15	11.9	NW	36	M	14	8	14	6.2	58	
Intern'l Falls	1178	971.6	1017.6	24	19	2.8	-2	29	+4	-36	27	0	31	4	72	.93	-.04	.29	14	0	15.2	15	8.3	-----	-----	-----	-----	-----	-----			
Minneapolis	830	986.1	1018.6	21	7	14.1	-5	37	+14	-21	27	0	31	8	77	.47	-.33	.29	10	0	7.8	7	10.7	M	38	M	14	10	9	12	6.0	49
Rochester	1017	979.0	1018.2	22	7	14	-4	36	+3	-23	27	0	31	10	79	.40	-.53	.18	9	0	4.6	3	9.8	M	3	M	14	9	15	6.1	--	
St. Cloud	1034	977.7	1017.9	20	0	10.0	-5	36	+14	-26	27	0	31	4	76	.57	-.18	.27	7	0	6.6	5	7.6	MWN	-----							

CLIMATOLOGICAL DATA

JANUARY 1955

State and station	Pressure			Temperature												Precipitation						Wind			No. of days (sunrise to sunset)									
	Elevation (ground)		Station	Sea level	Average maximum			Average minimum			Departure from normal			No. of days			Max. 90° F. or above			Departure from normal			Greatest in 24 hours			Snow, Sleet, Hail		Fastest mile						
	Ft.	Mb.	Mb.	*F.	*F.	*F.	*F.	*F.	*F.	Highest Date	Lowest Date	Average	Max. 32° F. or below	Total	%	Min. 29° F. or below	Average dew point	Total	In.	In.	In.	Oil inch or more	With thunderstorms	Total	In.	In.	M.	p. b.	Direction	Date	Clear	Partly cloudy	Cloudy	Sky cover, south (sunrise to sunset)
NEW JERSEY (Cont'd.)																																		
Newark	11	1014.0	1015.0	37	24	30.7	-0.8	53	2	12	28	0	28	16	50	0.81	-2.79	0.30	8	0	3.1	1	12.4	NW	*40	NW	7	12	9	10	5.2	6		
Trenton CO	56	1007.6	1014.8	37	25	30.6	-2.0	53	2	11	28	0	28	--	--	.52	-2.64	.19	6	2	2.8	1	9.8	--	35	NW	14	10	13	6	5.2	6		
NEW MEXICO																																		
Albuquerque	5310	848.6	1018.2	44	23	33.8	-.1	54	30	11	23	0	29	19	58	.29	-.01	.25	4	0	3.0	2	7.5	N	40	N	31	14	7	10	4.8	7		
Clayton	4969	843.2	1017.0	48	19	33.4	-.6	52	30	5	22	0	28	--	--	.03	-.24	.02	2	0	.2	T	--	--	43	NW	27	12	7	12	5.0	7		
Koswell	3612	893.7	1017.8	52	25	38.8	-.8	71	31	17	24	0	27	22	57	.29	-.13	.19	5	0	.8	1	8.3	--	--	--	--	--	--	--	--	--	--	
NEW YORK																																		
Albany	277	1011.1	1014.8	28	14	21.2	-1.3	41	2	1	30	0	31	12	68	.73	-1.54	.35	7	0	2.1	1	9.4	WWN	45	NW	7	11	12	8	5.3	6		
Binghamton	1601	953.8	1014.6	26	13	19.6	-2.1	40	2	-1	28	0	31	13	77	1.23	-1.15	.37	20	0	15.5	3	14.4	WWN	43	NW	7	4	5	22	7.5	6		
Buffalo	693	987.2	1016.5	30	19	24.8	-.7	50	1	3	28	0	31	18	76	2.61	-.17	.43	27	0	28.5	7	14.2	WSN	36	NW	15	6	1	61	4	4		
New York CO	10	1002.6	36	25	30.5	-2.4	51	2	12	28	0	28	--	--	.81	2.65	.31	8	0	2.9	1	15.4	--	61	NW	7	13	12	8	4.7	7			
New York	19	1013.7	1014.9	37	26	31.4	-.1	46	1	3	28	0	31	16	55	.85	-2.34	.39	8	0	2.4	1	16.1	WWN	56	NW	7	11	11	19	7.8	9		
Rochester	543	996.1	1016.1	29	18	23.5	-1.2	46	1	3	28	0	31	17	76	1.03	-1.33	.33	15	0	9.1	4	14.5	WSN	47	W	27	11	11	19	10	2		
Schenectady	217	1016.0	36	24	29	16	22.4	-.9	42	1	4	28	0	30	14	73	.56	1.86	.29	6	0	2.2	1	19	--	19	10	12	6	6.8	5			
Syracuse	424	993.8	1016.9	28	14	21.2	-4.3	44	2	-7	28	0	30	14	73	1.61	-1.18	.30	18	0	20.0	9	8.7	NW	40	W	27	6	8	17	6.8	5		
NORTH CAROLINA																																		
Asheville CO	2203	989.8	1018.3	46	28	36.8	-2.6	71	5	13	31	0	22	--	--	1.11	-1.87	.53	6	1	5.9	4	8.8	--	33	NW	13	7	12	12	6.0	5		
Charlotte	753	989.8	1018.3	51	32	41.3	-1.0	73	4	16	14	0	21	31	70	2.38	-1.30	.03	11	1	8.6	4	8.4	SW	44	NW	13	8	9	14	6.3	5		
Greensboro	891	985.8	1016.6	47	27	37.3	-.7	70	6	13	31	0	22	26	67	1.84	-1.53	.72	9	0	10.9	6	6.9	SW	36	NW	13	6	9	16	5.5	6		
Hatteras	4	1016.0	1016.8	49	38	43.9	-4.1	65	6	29	31	0	4	35	73	3.64	-.46	1.27	9	1	T	0	13.5	NW	46	NW	11	10	6	15	5.9	4		
Raleigh	438	981.7	1017.9	48	30	38.9	-.5	73	6	15	21	0	23	28	67	2.52	-1.01	.15	10	0	14.4	7	6.8	SW	25	NW	13	8	9	14	6.3	5		
Wilmington	30	1016.6	36	24	54	35	44.2	-3.6	76	6	23	31	0	15	--	--	3.34	.22	1.17	10	0	T	0	9.2	--	47	NW	13	12	6	13	5.6	5	
Winston-Salem	967	982.0	1018.3	46	29	38.5	-.8	71	6	15	31	0	21	25	62	1.90	-1.79	.60	12	1	9.7	5	6.7	NNW	25	NW	19	9	10	6.4	5			
NORTH DAKOTA																																		
Bismarck	1650	954.3	1017.9	26	4	15.0	5.8	38	30	-20	26	0	31	9	78	.42	.06	.14	11	0	5.8	4	10.7	NW	52	NW	14	4	8	19	7.5	5		
Devils Lake CO	1471	961.4	1017.9	17	1	7.6	34	14	21	28	0	31	--	--	.48	.08	.08	12	0	6.6	4	7.9	--	26	NW	14	7	9	15	6.7	4			
Fargo	695	981.7	1018.6	19	0	9.5	2.4	35	14	-18	28	0	31	4	76	.18	-.42	.05	7	0	2.8	3	13.0	NNW	42	NW	14	4	8	19	7.3	4		
Williston CO	1877	946.8	1017.8	24	4	14.0	4.0	35	13	-21	26	0	31	9	76	.80	.31	24	10	0	8.3	7	6.7	--	26	NW	14	3	4	24	8.2	3		
OHIO																																		
Akron	1210	978.7	1018.2	32	18	24.7	-2.7	56	5	-4	29	0	31	18	75	1.80	-.94	1.02	14	0	10.7	4	12.6	SW	23	SM	22	5	11	12	7.5	3		
Cincinnati Obs.	761	824	31.3	1.8	61	5	1	2.6	51	5	-2	29	0	25	23	74	2.61	-.79	.76	20	0	10.3	6	11.0	SSW	26	NW	25	2	6	23	8.2	2	
Cincinnati	869	985.8	1019.0	38	23	30.3	-1.5	61	5	-2	29	0	25	27	74	1.56	-.89	.90	12	0	10.4	3	11.7	SW	35	NW	27	4	4	23	7.9	2		
Cleveland CO	663	988.9	1017.6	31	21	26.9	-1.6	58	5	-1	29	0	30	20	73	2.22	-.16	1.02	20	0	9.4	3	11.7	SW	35	NW	27	4	4	23	7.9	2		
Cleveland	787	988.9	1017.6	36	24	30.2	-.9	59	5	0	4	24	0	24	1.17	1.64	.35	14	0	6.2	3	11.7	SW	35	NW	27	4	4	23	7.9	2			
Columbus CO	724	987.7	1016.8	36	24	28.5	-1.2	50	5	7	28	0	26	22	77	1.44	-.50	.50	15	0	7.1	3	10.3	SW	32	NW	26	5	19	7.4	4			
Columbus	815	987.7	1016.8	36	21	28.5	-1.2	50	5	7	28	0	26	22	78	1.59	-.65	.69	14	0	5.9	3	10.1	WWN	36	NW	25	3	21	7.4	4			
Dayton	1002	980.7	1018.6	35	21	28.1	-1.2	56	5	8	28	0	26	22	78	1.59	-.65	.69	14	0	5.9	3	10.1	WWN	36	NW	25	3	21	7.4	4			
Portsmouth CO	715	987.7	1017.9	36	23	31.4	-1.7	64	5	6	29	0	25	--	--	2.02	-.27	.19	15	0	5.5	3	8.2	--	34	SW	27	5	8	18	7.4	3		
Sandusky	603	994.5	1019.3	33	22	27.5	-.8	55	5	5	29	0	28	19	78	1.65	-.60	1.00	14	0	4.0	2	11.9	SW	40	NW	15	5	21	7.6	3			
Toledo	622	991.3	1017.9	33	19	25.6	-.8	58	5	5	29	0	28	19	78	1.65	-.60	1.00	1	1	7.0	S	--	33	SE	17	2	27	7.4	3				
Youngstown	1178	973.4	1017.8	32	17	24.5	-.3	51	2	2	29	0	30	--	--	3.03	-.99	.71	19	0	26.6	21	--	--	--	--	5	6	20	7.5	3			
OKLAHOMA																																		
Oklahoma City	1280	974.9	1019.7	48	29	38.7	1.6	68	4	17	27	0	25	30	74	1.03	-.47	.64	7	0	3.2	3	13.6	SSE	40	N	5	17	9	5	17	6.3	4	
Tulsa	672	994.2	1019.2	50	30	39.8	2.4	71	3	14	27	0	22	30	68	.77	-.21	.42	4	0	3.0	2	12.0	SSW	30	NW	14	10	4	17	6.3	4		
OREGON																																		
Astoria	12	1018.3	1019.6	47	35	41.0	-.9	53	27	19	0	8	0	30	16	66	.71	-2.50	.25	11	0	11.0	7	6	--	24	SM	22	5	12	12	8.6	3	
Burns CO	4140	970.3	1023.0	33	10	21.1	-2.6	46	2	4	4	31	0	31	12	74	3.26	-2.15	.89	16	0	2.2	7	24	5	9	--	36	SM	22</td				

See footnotes at end of table.

CLIMATOLOGICAL DATA

Table 2—Continued

JANUARY 1955

State and station	Pressure			Temperature												Precipitation						Wind			No. of days (sunrise to sunset)								
				Average maximum						Average minimum						Departure from normal			No. of days			Snow, Sleet, Hail			Fastest mile								
	Elevation (ground)	Station	Sea level	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	Highst	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point	Total	Departure from normal	Greatest in 24 hours	No. of days	With thunderstorms	Total	Max. depth on ground	Average hourly speed	Precipitation direction	Speed	Direction	Date	Clear	Partly cloudy	Cloudy	Sky cover / winds (sunrise to sunset)
TEXAS (Cont'd.)																																	
Austin	615	998.0	1020.3	62	42	51.6	1.7	81	1	28	24+	0	5	40	68	1.87	-0.76	1.09	1	2	T	0	10.7	NNE	34	NW	18	11	2	18	6.2	48	
Brownsville	16	1016.3	1018.6	72	54	62.9	2.4	83	1	36	24	0	0	55	76	1.15	-0.40	.55	8	0	0	0	12.2	SE	42	NW	18	9	7	15	5.4	51	
Corpus Christi	40	1018.3	1019.4	68	49	58.7	2.8	80	4	31	24	0	1	52	83	.78	.91	.48	.46	1.12	T	0	13.5	SSE	40	NW	17	10	7	14	6.1	58	
Dallas	487	1001.4	1020.5	56	38	46.7	1.0	74	4	25	23	0	12	37	71	1.35	-1.12	.88	8	1	T	0	8.7	SSE	40	NW	18	9	2	20	6.7	39	
Del Rio	1091	984.4	1019.3	63	40	51.1	-.8	77	3	27	24	0	7	37	62	.48	-.35	.21	.39	6	1	T	0	9.4	S	45	NW	18	10	1	20	5.7	53
El Paso	3920	887.2	1017.7	54	31	42.3	-1.1	69	31	20	10+	0	19	23	50	.59	-.17	.39	4	0	T	0	11.8	NNE	54	W	31	3	14	5.3	73		
Fort Worth	544	999.3	1020.7	55	37	46.3	1.0	74	4	25	23	0	12	36	71	1.17	-1.25	.94	8	0	T	0	13.5	S	*37	NW	18	10	1	20	6.8	68	
Galveston CO	7			61	49	55.2	.7	73	1	37	29	0	0	--	--	4.53	.44	1.92	10	0	0	0	12.5	S	47	W	18	3	7	10	6	44	
Galveston	5	1018.0	1020.3	61	49	54.8	.5	72	1	34	24	0	0	48	78	4.75	.41	2.01	8	2	0	0	12.7	SE	--	--	--	4	9	18	7.0	--	
Houston CO	41	1014.9	---	62	47	54.5	.7	76	3	34	29	0	0	--	--	5.51	1.53	2.04	8	2	0	0	9.8	---	32	NW	18	6	7	20	7.2	57	
Houston	50	1017.3	1020.4	63	45	54.1	.8	78	1	29	24	0	2	45	75	5.57	1.41	2.54	11	1	0	0	8.1	SSE	*30	NW	19	10	5	21	7.3	--	
Laredo	500	1003.4	1018.8	66	47	57.4	-.2	85	3	32	24	0	1	45	68	.73	-.29	.29	.8	1	0	0	13.1	SSE	45	NW	17	12	6	15	5.8	--	
Lubbock	3243	903.8	1017.8	51	28	39.7	-.9	68	30	14	23	0	26	27	66	.83	.16	.40	6	1	2.5	0	13.8	SW	*53	W	20	14	4	13	5.3	--	
Midland	2854	917.4	1017.9	55	31	42.9	-1.3	72	31	11	10	0	19	27	59	.68	-.06	.33	5	0	0	0	8.9	WSW	*36	WSW	20	13	5	13	5.3	--	
Port Arthur	16	1019.0	1020.5	62	45	53.3	.4	76	4	29	29	0	2	47	81	5.73	.61	2.19	11	3	0	0	12.2	N	42	W	18	4	9	18	7.1	41	
San Angelo	1903	950.6	1019.1	53	35	46.5	-.8	74	1	25	25	0	15	32	61	.62	-.37	.30	5	2	T	0	10.2	SW	*44	NW	17	12	4	15	5.6	--	
San Antonio	792	993.9	1019.5	64	42	53.1	2.5	80	3	28	24	0	3	38	60	1.45	-.36	.91	9	2	0	0	9.0	NNE	42	NW	17	10	5	16	5.8	55	
Victoria	110	1014.9	1019.7	65	47	55.8	.6	79	1	34	24	0	1	46	71	1.17	-1.55	.47	8	1	0	0	9.3	---	*49	NW	18	11	5	15	5.9	--	
Waco	500	1001.0	1020.1	58	39	48.6	1.3	77	3	25	29	0	6	39	72	1.58	-.80	.80	10	2	0	0	13.1	S	--	--	--	6	21	6.7	--		
Wichita Falls	1027	981.7	1019.3	53	34	43.5	2.9	73	4	24	23	0	17	33	67	1.23	-.08	.42	5	1	4.0	0	9.1	WSW	*35	NW	5	12	3	16	5.9	--	
UTAH																																	
Millford	5028	844.9	1023.7	33	19	4.4	-4.4	44	30	-11	17	0	31	--	--	.60	-.03	.24	8	0	0	8.8	---	--	--	--	10	7	14	5.8	--		
Salt Lake City	4220	869.6	1023.9	31	11	21.1	-5.4	47	1	20	28+	0	30	16	81	1.34	-.14	.45	11	0	22.5	9	6.5	SSE	32	S	2	7	5	19	7.0	54	
VERMONT																																	
Burlington	331	999.3	1014.8	23	9	16.2	-1.7	40	2	-6	31	0	31	9	71	.56	-1.33	.21	11	0	7.6	3	10.3	N	31	NW	27	8	6	17	6.9	50	
VIRGINIA																																	
Lynchburg	947	982.8	----	44	27	35.3	-2.4	66	6	10	28	0	24	--	--	1.33	-2.10	.45	9	0	10.1	4	8.2	---	28	SW	6	7	10	14	6.3	52	
Norfolk	26	1016.3	1017.6	45	31	38.4	-3.1	68	6	21	28	0	20	27	66	2.41	-.76	1.19	7	0	13.8	5	10.7	SSE	32	NW	2	12	3	16	6.0	68	
Richmond	162	1013.0	1017.8	46	26	35.6	-2.5	69	6	10	31	0	26	25	67	1.09	-2.55	.81	6	0	9.3	8	7.5	WW	24	NW	6	8	15	6.2	51		
Roanoke	1174	974.5	1017.9	44	27	35.3	-2.6	66	6	11	31	0	25	22	60	1.19	-2.20	.61	6	0	11.0	4	9.1	NW	--	--	6	10	15	6.9	--		
WASHINGTON																																	
Olympia	190	1011.9	1019.4	44	33	38.7	1.7	51	5	25	26	3	0	16	35	88	3.01	-3.68	.54	19	0	.4	0	6.7	SSW	*31	W	13	1	5	25	9.1	--
Seattle CO	14	39	42.5	1.8	54	18	34	19	0	0	0	16	35	88	3.01	-.68	.54	19	0	0	0	8.5	---	45	SW	13	1	2	28	9.3	21		
Seattle	14	1018.6	1019.6	44	35	39.1	1.9	50	18	27	19	0	9	37	84	3.35	-1.38	.52	17	0	T	0	6.0	SSE	--	--	--	1	3	27	9.2	--	
Seattle-Tacoma	379	1005.1	1019.6	44	35	39.1	1.9	50	18	27	19	0	9	37	91	3.35	-1.38	.52	17	0	T	0	9.0	SW	--	--	--	1	3	27	9.2	--	
Spokane	2357	950.2	1021.2	32	22	26.9	2.0	43	26	11	21	0	31	24	86	1.38	-.34	.29	17	0	15.6	7	5.7	NE	32	S	13	1	30	9.7	12		
Stampede Pass CO	384	878.4	1020.4	29	22	25.7	2.0	38	27	15	8	0	31	--	--	8.13	-4.92	1.72	22	0	63.3	79	0	15.6	---	3	27	9.2	--				
Tatoosh CO	101	1014.6	1018.0	46	40	42.9	-.9	51	31	26	4	0	0	39	85	6.44	-3.75	.98	25	0	T	0	15.9	E	66	W	13	2	27	9.0	23		
Walla Walla CO	949	984.8	1021.7	39	29	34.3	2.3	50	21	4	0	25	1.43	-.25	.34	14	0	7.4	2	4.8	---	33	S	18	0	4	27	9.1	11				
Yakima	1061	981.7	1022.1	35	24	29.4	2.5	47	1	11	21	0	31	26	66	.58	-.38	.25	9	0	6.6	3	3.4	W	--	--	3	25	8.5	--			
WEST VIRGINIA																																	
Charleston	950	982.0	1018.7	41	25	32.9	-3.5	64	6	2	31	0	26	24	71	2.05	-1.94	.61	17	0	8.4	3	9.5	SW	*35	W	25	2	7	22	8.0	--	
Elkins	1970	-----	36	17	26.3	-5.9	59	5	12	28	0	29	20	--	1.76	-1.46	.25	22	0	13.1	5	7.8	WW	*29	W	27	0	8	23	8.5	--		
Huntington	565	-----	43	26	34.3	-3.7	65	6	29	0	26	--	--	1.98	-1.63	.66	12	0	3.2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Parkersburg	615	-----	40	24	32.0	-2.4	64	5	2	31	0	26	--	--	1.53	-1.64	.26	18	0	6.5	2	6.4	---	25	NW	27	3	10	18	7.6	22		
WISCONSIN																																	
Green Bay	689	992.9	1016.8	25	7	15.7	-.4	40	3	14	27	0	31	10	73	.78	-.51	.46	7	0	6.7	5	10.9	W	38	W	15	9	7	15	6.2	51	
La Crosse																																	

HEATING DEGREE DAYS

(Base 65° F.)

Table 3

JANUARY 1955

State and station	Current season			State and station	Current season			State and station	Current season			State and station	Current season			
	This month	Period July through this month	Normals July through this month		This month	Period July through this month	Normals July through this month		This month	Period July through this month	Normals July through this month		This month	Period July through this month	Normals July through this month	
ALABAMA				IOWA (Cont'd.)				NEW MEXICO				TEXAS (Cont'd.)				
Birmingham	659	1887	1753	Sicoux City	1321	3636	4156	Albuquerque	961	2487	2727	Houston (CO)	336	701	843	
Mobile	442	1200	1039	KANSAS	1078	2820	3192	Clayton	973	2697	2986	Houston	347	794	903	
Montgomery	573	1599	1381	Concordia (CO)	974	2639	3027	Roswell	807	2151	2202	Laredo	259	464	576	
ARIZONA				Dodge City	974	3380	3676	NEW YORK	1351	3797	3901	Midland	779	2074	2256	
Flagstaff	1322	4008	4198	Goodland	1197	3676	3976	Albany	1400	4142	4193	Port Arthur	365	877	993	
Phoenix (CO)	487	844	980	Topeka (CO)	1024	2688	2979	Binghamton	1240	3576	3695	San Angelo	568	1351	1410	
Phoenix	500	889	1119	Topeka	1043	2767	3152	Buffalo	1064	2788	2766	San Antonio	376	782	1062	
Prescott	996	2469	2641	Wichita	930	2477	2786	La Guardia Field	1035	2566	2724	Victoria	296	608	760	
Tucson	560	1028	1123	KENTUCKY	1014	2856	2892	Rochester	1282	3697	3765	Waco	508	1186	1311	
Winslow	1023	2727	2904	Lexington	966	2680	2666	Schenectady	1316	3648	3594	Wichita Falls	662	1617	1937	
Yuma	398	676	682	Louisville	882	2499		Syracuse	1354	3730		UTAH				
ARKANSAS				Pikeville (CO)				NORTH CAROLINA				Milford	1405	3825	3828	
Ft. Smith	739	1971	2048	LOUISIANA	Baton Rouge	427	1006	1039	Asheville (CO)	867	2685	2427	Salt Lake City	1353	3544	3473
Little Rock	680	1829	1898	Lake Charles	368	925	1008	Asheville	913	2879		VERMONT				
Texarkana	613	1584	1513	New Orleans (CO)	330	792	770	Charlotte	731	2109	1978	Burlington	1509	4333	4385	
CALIFORNIA				Int. Airport, Moisant	365	935	848	Greensboro	851	2522	2319	VIRGINIA				
Bakersfield	625	1550	1380	Shreveport	528	1331	1398	Hatteras (CO)	649	1542	1315	Lynchburg	1913	3665	2471	
Bishop	1164	2800	2515	MARYLAND	Baltimore (CO)	926	2479	2417	Raleigh	802	2401	2036	Norfolk	820	2138	1986
Blue Canyon	971	2958	2899	Baltimore	1005	2854	2773	Wilmington	635	1739	1402	Richmond	898	2510	2360	
Burbank	433	901	976	Frederick	1039	3024	2842	Winston-Salem	814	2430	2255	Roanoke	915	2713	2472	
Eureka (CO)	638	2574	2585	MAINE	Caribou	1664	5361	5663	NORTH DAKOTA	1546	4550	5254	WASHINGTON			
Fresno	716	1820	1640	Greenville (CO)	1633	5043		Bismarck	1770	5145	5769	Olympia	810	3147	3122	
Los Angeles (CO)	345	669	779	Portland	1315	4045	4220	Devils Lake (CO)	1713	4920	5399	Seattle (CO)	693	2398	2528	
Los Angeles	397	813	1075	MARYLAND	Baltimore (CO)	926	2479	2417	Grand Forks	1829	5261		Seattle	793	2910	3025
Mt. Shasta (CO)	1050	3500	3324	Baltimore	1005	2854	2773	Pembina	1909	5081		Spokane	1173	3859	3983	
Oakland	638	1789	1790	Frederick	1039	3024	2842	Williston (CO)	1573	4483	5271	Stampede Pass (CO)	1213	5326	5111	
Red Bluff	684	1799	1559	MARYLAND	Baltimore (CO)	926	2479	2417	Tatooch Island (CO)	680	2975	3193	Walla Walla (CO)	948	2781	2988
Sacramento (CO)	680	1782	1594	Baltimore	1005	2854	2773	Yakima	1096	3559	3657	Yakima				
Sacramento	707	1888	1714	Frederick	1039	3024	2842	OHIO	1241	3570	3464	WASHINGTON				
Sandberg (CO)	917	2308	2184	MARYLAND	Blue Hill Obs.	1252	3584		Akron	967	2622	2653	Olympia	810	3147	3122
San Diego	336	642	813	Baltimore	1127	3046	3128	Cincinnati (CO)	1068	3015	3028	Seattle (CO)	693	2398	2528	
San Francisco (CO)	514	1860	1709	Nantucket	1078	2926	3098	Cleveland (CO)	1126	3037	3112	Charleston	987	2862	2607	
San Francisco	616	2024	1890	Pittsfield	1411	4260	4291	Cleveland	1173	3228	3313	Elkins	1192	3592	3312	
San Jose	572	1489	1348	MARYLAND	Baltimore (CO)	926	2479	2417	Columbus	1127	3185	3233	Huntington (CO)	943	2682	2434
Santa Maria	558	1644	1566	Frederick	1039	3024	2842	Dayton	1140	3219	3222	WISCONSIN				
COLORADO				MICHIGAN	Alpena (CO)	1331	4146	4320	Akron	1241	3570	3464	Green Bay	1526	4477	4641
Alamosa	1458	4718	5112	Detroit	1196	3425	3536	Sandusky (CO)	1156	3162	3238	La Crosse	1476	4161	4459	
Colorado Spings	1165	3317	3513	Detroit (Willow Run)	1223	3488	3616	Toledo	1213	3447	3573	Madison (CO)	1421	3964	4164	
Denver	1163	3183	3489	East Lansing (CO)	1248	3614		Youngstown	1251	3600	3437	Madison	1422	4083	4269	
Grand Junction	1265	3478	3564	Escanaba (CO)	1400	4307	4686	OKLAHOMA	807	2076	2282	Milwaukee	1335	3716	3999	
Pueblo	1086	2969	3383	Grand Rapids (CO)	1207	3444	3597	Oklahoma City	780	1972	2239	WYOMING				
CONNECTICUT				Grand Rapids	1259	3702	3927	Tulsa	780	1972		Casper	1317	3837	4345	
Bridgewater	1102	2965	3169	Marquette (CO)	1361	4411	4602	OREGON	737	2757	2733	Cheyenne	1236	3665	4137	
Hartford	1198	3380	3458	Muskegon	1237	3644	3836	Astoria	1352	4204	4103	La Jolla	1299	4055	4833	
New Haven	1122	3137	3276	Sault Ste. Marie	1489	4872	5162	Burnett	802	2775	2770	Lander	1299	3805	4505	
DELAWARE				MINNESOTA	Duluth (CO)	1660	5198	5386	Meacham	1198	4402	4348	Sheridan	1253	3829	4505
Wilmington	1031	2866	2824	Duluth	1704	5305	5600	Pendleton	990	3039	3161	ANCHORAGE				
DIST. OF COLUMBIA				International Falls	1925	5810	6145	Medford	891	2781	2711	ANCHORAGE	1444	6130	6419	
Washington (CO)	909	2543	2488	Minneapolis	1571	4336	4577	Portland (CO)	731	2286	2418	CHEYENNE	1339	3675	3964	
Washington	910	2571	2523	Rochester	1553	4463	4716	Portland	731	3226	3273	LAKE PLACID	1352	4055	4346	
FLORIDA				St. Cloud	1701	4896	5173	Portland	785	2685		LAKE PLACID	1444	6130	6419	
Apalachicola (CO)	357	950	827	MISSISSIPPI	Columbia	1024	2793	3064	Portland	785	2685		CORVALLIS	1214	3843	4693
Daytona Beach	274	753	533	Jackson	577	1519	1417	Portland	777	2397	2673	CORVALIS	1062	5233	5436	
Fort Myers	151	347	250	Meridian	1616	2665	1517	Portland	777	2397	2673	CORVALIS	1062	5233	5436	
Jacksonville (CO)	327	900	719	Vicksburg (CO)	520	1316	1282	Philadelphia (CO)	996	2711	2777	CORVALIS	1062	5233	5436	
Jacksonville	370	1006	804	MISSOURI	Columbia	1024	2793	3064	Philadelphia	996	2711	2777	CORVALIS	1062	5233	5436
Key West (CO)	32	57	46	Kansas City	1002	2598	2960	Pittsburgh (CO)	1065	3029	3022	CORVALIS	1062	5233	5436	
Miami (CO)	87	160	110	St. Joseph	1152	2994	3223	Pittsburgh	1051	2542	2882	CORVALIS	1062	5233	5436	
Miami Beach	75	157	118	St. Louis (CO)	954	2596	2686	Reading (CO)	1047	2689	2888	CORVALIS	1062	5233	5436	
Miami Beach	50	93	80	St. Louis	983	2717	2822	Scranton (CO)	1225	3434	3413	CORVALIS	1062	5233	5436	
Orlando	218	591	410	Springfield	949	2637	2842	Williamsport	1180	3364	3382	CORVALIS	1062	5233	5436	
Pensacola (CO)	405	1058	912	MISSOURI	Billings	1160	3436	4072	RHODE ISLAND	1066	2859	2989	CORVALIS	1062	5233	5436
Tallahassee	421	1217	991	Glasgow (CO)	1616	4323	5141	Block Island	1139	3194	3346	CORVALIS	1062	5233	5436	
Tampa	210	552	424	Great Falls	1204	3690	4270	Providence	1139	3194	3346	CORVALIS	1062	5233	5436	
West Palm Beach	93	218	154	Havre (CO)	1466	4013	4811	SOUTH CAROLINA				CORVALIS	1062	5233	5436	
GEORGIA				Helena	1378	4513	4818	Charleston (CO)	571	1262	1103	CORVALIS	1062	5233	5436	
Athens	665	1949	1738	Kalispell	1258	4528	4720	Charleston	531	1478	1250	CORVALIS	1062	5233	5436	
Atlanta	654	1911	1757	Miles City	1337	3862	4584	Columbia	647	1852	1544	CORVALIS	1062	5233	5436	
Augusta	639	1795	1356	Missoula	1316	4462	4884	Florence	616	1738	1603	CORVALIS	1062	5233	5436	
Columbus	607	1709	1514	Nebraska	1242	3237	3675	Greenville	689	2093	1873	CORVALIS	1062	5233	5436	
Macon	555	1561	1321	North Platte	1392	3706	3925	Spartanburg	694	2084	1881	CORVALIS	1062	5233	5436	
Rome	761	2245	1956	Valentine (CO)	1271	3669	4091	SOUTH DAKOTA				CORVALIS	1062	5233	5436	
Savannah	525	1471	1099	NEVADA	Elko	1603	4608	4241	Burton	1449	4202	4626	CORVALIS	1062	5233	5436
IDaho				Topeka (CO)	1557	4469	4232	Pierre	1312	3854		CORVALIS	1062	5233	5436	
Boise	1279	3605	3509	Las Vegas	733	1674	1622	Rapid City	1266	3609	2121	CORVALIS	1062	5233	5436	
Lewiston	1031	3313	3307	Reno	1238	3724	3474	Memphis	720	1985	1973	CORVALIS	1062	5233	5436	
Pocatello	1483	4384	4050	Tonopah	1505	3605	3323	Nashville	832	2328	2150	CORVALIS	1062	5233	5436	
ILLINOIS				Winnebucca	1456	4281	3765	TEXAS				CORVALIS	1062	5233	5436	
Cairo (CO)	838	2285	2321	MISSOURI	Bristol	945	2746	2506	Abilene	591	1447	1721	CORVALIS			

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4

JANUARY 1955

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Chickasha, Grady County, Okla.	1				0	0	Minor	\$0	Tornado	Minor storm reported at Wilseyville, Calif. TV aerial and brick chimney blown down at Chickasha. 2 black, low-hanging clouds observed northeast of Chickasha in vicinity of Tabler. Minor dam- age to house 2 miles northwest of Chickasha.
Northumber- land Coun- ty, Pa.	5	5 a.m.				1			Snow	Icy roads led to 2 auto accidents within 2 hours on same section of highway near Milton, with injury to 1 person.
New England, southeast- ern por- tion	6	Morning				Many			Glaze (ice)	Unusually severe glaze storm struck southeastern New England from Portland, Me., to Providence, R. I. Many traffic accidents, mostly minor, and traffic jams widespread as cars unable to ne- gotiate even some of lesser rises of streets and highways. Many injuries from traffic accidents or falls while walking. Property damage generally limited to trees (broken branches) and automobiles (in collision).
New England	6									Minor storm also reported at Wilseyville, Calif.
	7	All day							Wind	Strong northwest winds and gales swept most of New England as aftermath of Atlantic storm of preced- ing date. Property damage mostly consisted of television antennas blown down and windows shattered. Wind gusts reached 67 m.p.h. at Boston.
Richmond and Wil- liamsburg and on Middle Peninsula, and North- ern Neck, Va.	10									Minor storm also reported at Galveston, Texas.
	11	12:01 a.m. -1 p.m.							Snow and freezing rain (glaze)	Schools closed generally in this and adjoining areas. Power out in 60 to 75 locations around Richmond. In each location 2 to 200 customers affected. Telephone service interrupted in about 500 homes in Richmond, but worst trouble was with long-distance lines to the east. Many minor auto accidents.
Hanover and Henrico Counties, Northern Neck, and northern half of Middle Peninsula, Va.	13	2-11 a.m.				8			do	Snow up to 6 inches in far southwest, preceded by freezing rain caused many collisions, principally on U.S. Route 1 in Richmond-Ashland area.
Dauphin County, Pa.	13	2:15 p.m.				7	\$1,000		Snow	4 persons seriously injured when car skidded on icy section of road in Clarks Valley. 3 boys injured in coasting accidents in Harrisburg area.
Pennsylva- nia, cen- tral por- tion	15	Morning				8			do	A baby and 2 adults injured in skidding accident on icy roads near Boiling Springs. 2 women injured in similar accident near Dornsife, about 10 miles east of Sunbury. 3 persons injured in similar accident in Shippensburg.
Wilseyville, Calaveras County, Calif.	15	5 p.m.							do	Rain turned to snow; water content very great; roads blocked with fallen trees; power and tele- phone lines down; unable to send wire reports due to telephone service suspended for week. Storm forced lumber mill to suspend operations for week.
Los Angeles (downtown), Los Angel- es County, Calif.	17									Minor storm also reported at Blountstown, Fla.
	18	11:01 a.m.	3	20-25	0	0	10,000		Tornado	Small localized windstorm described as small tor- nado observed from east side of Federal Building and described as small, dark cloud touching ground and moving northeastward. Storm appeared to have started in vicinity of Seventh Street and Central Avenue where skylights damaged. It caused arching of power lines and burned out a transformer. Large signboard and tree downed. Automobile over- turned and moved 40 feet hitting another automo- bile. Pieces of corrugated iron roofing and sheet iron ventilator blown against wire fence. Damages sustained by doors, plate-glass windows, etc.
Charleston County, S. C.	18	10-11 p.m.					11,500		Wind	Damage to planes, utility poles, and lines.

See footnotes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

Table 4—Continued

JANUARY 1955

Place	Date	Time	Length of path, miles	Width of path, yards	Number of persons		Estimated damage		Character of storm	Remarks
					Killed	Injured	Property (exclusive of crops)	Crops		
Kansas	18				2				Snow	1 to 7 inches of snow left highways slippery, resulting in many highway accidents.
Woodsmere (4 miles northwest of Orlando), Fla.	18	10:30 p.m.	**150	50	0	0			Tornado	Storm moved toward north about 50 yards then toward northeast about 100 yards; uprooted trees in first sector of path aligned with path, those in second sector aligned toward center of path. About 25 grapefruit trees uprooted and several pine trees snapped off at base. Many trees in path remained standing. Moved north and northeastward.
	18									Minor storm also reported at Nederland, Texas.
Southside and South- west High- lands, Va.	19	6 a.m. - noon				10	\$5,000		Snow	15 inches of snow in Abingdon area and up to 6 inches elsewhere in region. 19 auto accidents on Route 1 in Richmond-Petersburg area. Schools closed in 21 counties.
Honolulu and Island of Oahu	21				1	3	500,000		Wind	Plate glass broken; trees, utility poles and lines downed; parts of many roofs blown off, more extensive damage to some buildings; hundreds of damage claims filed. 1 person electrocuted by "live" wire; 3 persons injured by shattered glass or wind-driven roofing.
Eastern Perry County and western Dauphin County, Pa.	22	Morning				1			Snow	Truck-trailer jack-knifed on icy road and crashed into guard rail, delaying traffic at west approach to Clarks Ferry Bridge. 40 cars stalled on Peter's Mountain hill due to icy roadway, blocking road for several hours. Another tractor-trailer skidded and crashed about 3 miles north of Harrisburg.
Clearfield County, Pa.	23	Daytime			1	1			do	Car skidded out of control on icy road near Houtzdale, killed 1 girl and injured another.
	23									Minor storms also reported at Milton and Marianna, Fla.
	24									Minor storms also reported at Saint Marks, Quincy, and Madison, Fla.
Pennsylva- nia, entire State	25	Afternoon and evening			2	23			do	Light snowfall, averaging about 2 inches, packed to create icy highways which were scene of scores of minor traffic accidents and several major accidents. 1 person killed near Pittsburgh, another near Bloomsburg. At least 13 persons injured in skidding accidents. At least 9 other persons injured in pedestrian falls.

** Yards instead of miles.

HURRICANE "ALICE", JANUARY 1955

Compiled by C. E. Rhodes
U. S. Weather Bureau, Washington, D. C.

The record breaking 1954 hurricane season ended only 6 weeks before the occurrence of hurricane Alice of 1955 on January 2. This was the first hurricane in the North Atlantic ever reported by the Weather Bureau in January. The path of this storm during the hurricane stage was confined to an area bounded by latitudes 15° and 20°N. and longitudes 59° and 66°W.

Although important wintertime storms have no doubt occurred in this area in the past, there are no verified records of earlier storms with the intensity and hurricane characteristics observed in Alice of 1955.

Early historians recorded as hurricanes two severe winter storms encountered by Columbus in February and March of 1493 near the Azores on the return portion of his first voyage to America; but more recent comparison of the weather logs of this voyage with the data of known storms does not support the early statement that they were hurricanes.

The disturbed conditions that eventually developed into hurricane Alice had been under surveillance since 7:30 a.m., December 30, when a series of ship reports showed a definite closed circulation near latitude 22°N., longitude 52°W. The storm appeared to be of extratropical nature but began to move on a west-southwest track and approached the northern Leeward Islands. In the afternoon of January 1 reports were received which indicated a stronger and better organized wind circulation than is normally observed in low centers of extratropical characteristics. The first report was received from the ship Arawak which at 2:15 p.m., e.s.t., was positioned at 19°15'N., 59°10'W., with "wind west, force 12; barometer 29.15 inches; temperature 66°; visibility nil". Soon afterward at 6:05 p.m., another ship with radar facilities reported the center "located at 19°07'N., 60°07'W.; moving 255° at 17 knots; diameter of center 20 miles; scattered showers; surface winds 47 knots; seas very rough; swell 040° 15 feet, lasting 6 seconds; sea level pressure 29.56 inches". Other vessel reports along the same line followed in quick succession. It was evident that the low had tropical characteristics and was endangering the islands in the northeastern corner of the Antillian chain.

Reports received during January 2 indicated that the storm was continuing in a west-southwest track and was now accompanied by winds of hurricane intensity. Late on January 2 the hurricane entered

the Caribbean and passed just south of the island of St. Barthelemy between 10:00 a.m. and 1:00 p.m.

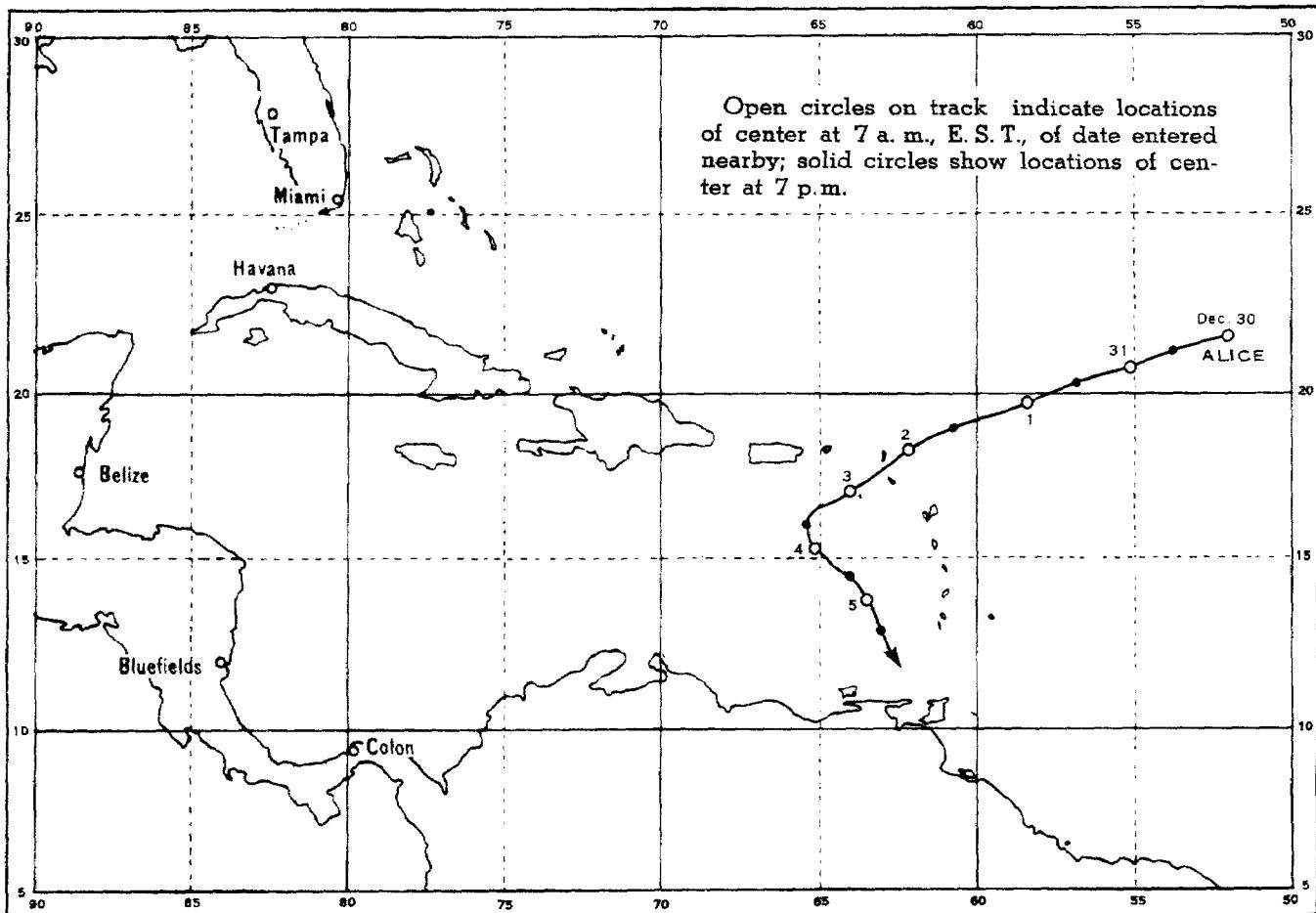
Estimated winds of 75 m.p.h. were reported at the airport on the island of St. Kitts and 69- to 81- m.p.h. winds on St. Barthelemy. During January 3 aircraft reconnaissance into the storm reported maximum winds of 75 knots. A dropsonde in the "eye" indicated that the storm had a warm-core center. Further reconnaissance flights were made during the afternoon of January 3 and on the 4th. However, after January 3 the storm decreased rapidly in intensity. It continued on a southwest track, then turned to the south and southeast. Reconnaissance on January 4 reported only a wide area of squalls. Afterward, the low drifted slowly southeastward and dissipated in the southeastern Caribbean Sea during January 5 and 6.

The hurricane affected the islands of Anguilla, St. Martin, and St. Barthelemy on its north side and the islands of St. Kitts, St. Eustatius, Nevis, Barbuda, Saba, and others to the south of the center. The estimate of losses in dollars is not available, but the destruction represents a great blow to the economy of these small islands. The damage to shipping in particular was severe. In the island of Anguilla 4 schooners, 11 sloops, and 1 boat were destroyed or badly damaged. On land the courthouse was destroyed with considerable loss of records; 4 private homes were destroyed and others damaged. Most of the crops were destroyed or damaged. In St. Martin two schooners and one sloop were lost, and one boat was badly damaged. The schoolhouse was unroofed and the loss of crops was considerable. The island of Saba had heavy rains, causing landslides that destroyed concrete roads and did other damage. Two schooners very important to the economy of the island were destroyed. Losses in general were heavy. At St. Kitts the rainfall averaged 7 inches for the period; rivers flooded and streets and sugar cane fields were heavily damaged. Losses in shipping include 5 open lighters and 2 sloops destroyed.

In Puerto Rico and the Virgin Islands little effect was felt from the storm. The disturbance was somewhat beneficial in Puerto Rico; rainfall was more than the ordinary and it alleviated a dry period which had persisted since the middle of October. Maximum gusts up to 45 knots were reported from St. Thomas and St. Croix and up to 40 knots in eastern Puerto Rico.

HURRICANE "ALICE", JANUARY 1955—Continued

Track of Hurricane "Alice", December 30, 1954 to January 6, 1955



GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JANUARY 1955

No damages were reported from the light flooding during January. Drought conditions continued for the 13th consecutive month in portions of the East Gulf of Mexico drainage. The previous January record low stage was equalled on the Cahaba River at Marion Junction, Ala.

ST. LAWRENCE DRAINAGE

The light flooding in the Lake Erie drainage between the 6th and 9th was due to light to heavy precipitation between the 4th and 6th. The precipitation during the last 24-hour period averaged about 1.25 inches. No damages were reported.

ATLANTIC SLOPE DRAINAGE

During January, flooding in the Atlantic Slope drainage was due to the heavy rains from December 28 to 29, and was reported last month.

EAST GULF OF MEXICO DRAINAGE

Light flooding on the Pearl River at Bogalusa, La., on the 1st and 2d was due to heavy rain (2 to 4 inches) on December 28 and 29. Another rise with minor flooding occurred again on the 18th and 19th from the heavy rain on the 15th and 16th. No damage resulted from the overflows.

The stage of 2.9 feet reached on the Cahaba River at Marion Junction, Ala., on the 10th equalled the lowest January stage of record, 1939 - 1955. The previous January record low stage was 2.9 feet on January 4 and 5, 1940.

The annual rainfall in the State of Alabama during 1954 was 34.56 inches, or 18.89 inches below normal, making 1954 the driest year of record, 1884 - 1954, in the State. Previous driest year was 1904 with an annual rainfall of 39.48 inches. December 1954 was the 12th consecutive month with precipitation below normal in Alabama.

The United States Geological Survey reports that January was the 7th month since May 1953 with record low monthly runoff at the key station on the Conecuh River at Brantley, Ala. January 1955 was the first month with near normal stream flow at Centreville, Ala., since January 1954.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Moderate rains in the Illinois Basin during the 48-hour period ending on the morning of the 7th caused light flooding at La Salle and Havana, Ill., between the 7th and 14th. The precipitation averaged slightly less than an inch in the upper reaches and about 1.4 inches in the middle and lower reaches. No damage was reported.

Missouri Basin.--Rivers were at low stage over the Missouri Basin during January with the exception of some light flooding on the Charitan and Lamine Rivers in Missouri. Snows were generally light, and at the end of the month there were

only 1 to 5 inches of accumulated snow on the ground in the Plains area. Most of the basin had only 1 to 3 inches. The soil is generally dry beneath the snow.

The Missouri River froze over at Sioux City, Iowa, on the 13th and at Yankton, S. Dak., on the 20th and 21st. At the close of the month there were numerous small ice jams from Yankton to below Sioux City with stretches of open water. The ice was relatively thin for this date, reports indicating a thickness of 10 to 15 inches.

Ohio Basin.--Precipitation occurred frequently during January, measurable amounts being reported over the Ohio Basin on 26 days. However, with temperatures below normal during more than half the month, the precipitation fell as snow on 18 of the 26 days. Runoff from rainfall occurred during the first week, with alternate periods of snowmelt runoff, or a combination of both, during the remainder of the month. By the 10th, snow cover over much of the valley ranged from 2 to 5 inches, except for local amounts of 12 to 15 inches at higher elevations in West Virginia. This cover disappeared or decreased with thawing, followed by similar depths and periods of melting at intervals throughout the month. At the end of January, a snow cover of 2.5 inches remained north of the Ohio River, ranging up to 15 inches in West Virginia and little or none elsewhere. Light floating ice and shore ice was reported throughout most of the Ohio River on January 28 - 31, but caused no particular difficulty since the river was in pool. Smaller tributaries were frozen over during the latter part of the month, with shore and floating ice reported in most larger tributaries. Late December rises caused tributaries to recede at the beginning of the month. Moderately heavy rainfall on the 4th to 6th resulted in sharp rises with moderate flooding only on the upper and middle Wabash and White Rivers, where flood stages were exceeded by 1 to 5 feet. Slight tributary rises occurred on several occasions later in the month from snowmelt or light rainfall, or a combination of both.

At the beginning of January, the Ohio River was rising rapidly--a continuation of the late December rise. Except at Dam 50 which was only 2.5 feet under flood stage, crests of this rise were well below flood stage. The Ohio receded rather slowly thereafter due to occasional periods of snowmelt runoff, finally reaching pool conditions on the 23d to 25th.

Lower Mississippi Basin.--The heavy rains from December 27 to 29, 1954, caused minor flooding on the St. Francis River on the 1st and 2d. The precipitation averaged about 2 inches in the upper reaches, about 3½ inches in the area from Wappapello Dam to St. Francis, and 3 inches elsewhere.

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

Table 5

JANUARY 1955

River and station	Flood stage	Above flood stages -dates		Crest*		River and station	Flood stage	Above flood stages -dates		Crest**	
		From-	To-	Stage	Date			From-	To-	Stage	Date
St. LAWRENCE DRAINAGE <u>Lake Erie</u>	ft			ft		MISSISSIPPI SYSTEM (Cont'd.) <u>Ohio Basin (Cont'd.)</u>	ft			ft	
St. Marys: Decatur, Ind.	15	6	9	17.5	7	White: Edwardsport, Ind.	12	6	12	14.8	8
Maumee: Fort Wayne, Ind.	15	6	7	15.9	7	Wabash: Wabash, Ind.	12	6	9	17.0	7
MISSISSIPPI SYSTEM <u>Upper Mississippi Basin</u>						La Fayette, Ind.	11	6	10	16.6	8
Illinois: La Salle, Ill.	20	7	8	**20.5	7	Covington, Ind.	18	9	10	19.1	10
Havana, Ill.	14	11	14	14.0	12-13	Montezuma, Ind.	14	7	12	16.5	11
Missouri Basin						Lower Mississippi Basin					
Chariton: Novinger, Mo.	20	5	6	23.4	6	St. Francis: Fisk, Mo.	20	1	2	20.2	2
Lamine: Clifton City, Mo.	15	6	6	16.6	6	EAST GULF OF MEXICO DRAINAGE					
Ohio Basin						Pearl: Bogalusa, La.	15	1	2	16.3	1
White: Anderson, Ind.	10	6	17	11.4	7					15.4	19
						*	Provisional				
						**	Highest stage reported but not necessarily the crest				

RADIOSONDE DATA

Average monthly values

Table 20

JANUARY 1955

ALBUQUERQUE, N. MEX. (838 MB.)		ANCHORAGE, ALASKA (997 MB.)		ANNETTE, ALASKA (1009 MB.)		ATLANTA, GA. (983 MB.)		BARROW, ALASKA (1011 MB.)		BETHEL, ALASKA (994 MB.)		BISMARCK, N. DAK. (955 MB.)																
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity				
SURFACE	31	1,619	- 1.6	51	31	42	- 6.4	70	31	37	3.5	87	30	309	5.9	76	31	8	- 25.6	53	31	4	- 8.3	84	31	505	- 9.8	78
1000	31	167	- 6.5	51	31	6	- 6.5	70	31	108	3.3	86	30	154	84	70	31	24	- 24.2	70	31	49	- 10.7	31	31	142	- 7.6	64
950	31	595	- 5.5	51	31	415	- 3.5	66	31	526	1.2	82	30	589	5.2	62	31	472	- 19.7	81	31	361	- 5.8	72	31	546	- 9.6	74
900	31	1,040	- 4.0	51	31	837	- 4.0	65	31	955	- 1.1	82	30	1,026	4.9	54	31	864	- 15.6	78	31	776	- 6.8	71	31	962	- 7.6	64
850	31	1,502	- 2.9	45	31	1,286	- 6.6	69	31	1,409	3.4	80	30	1,495	4.8	43	31	1,296	- 15.2	69	31	1,220	- 8.8	70	31	1,405	- 8.4	65
800	31	1,991	- 9	45	31	1,757	- 9.5	71	31	1,887	5.9	78	30	1,988	3.5	47	31	1,752	- 16.7	63	31	1,687	- 11.2	70	31	1,875	- 9.3	64
750	31	2,515	- 2.3	40	31	2,254	- 12.7	69	31	2,394	- 8.9	75	30	2,517	1.7	45	31	2,242	- 18.6	59	31	2,182	- 14.2	67	31	2,379	- 11.4	60
700	31	3,052	- 5.3	46	31	2,775	- 16.1	63	31	2,921	- 11.7	68	30	3,063	1.1	42	31	2,746	- 18.2	56	31	2,699	- 17.6	67	31	2,898	- 13.9	54
650	31	3,636	- 8.6	45	31	3,334	- 19.9	58	31	3,490	- 15.2	62	30	3,658	4.0	40	31	3,295	- 25.0	55	31	3,257	- 21.3	62	31	3,469	- 16.9	54
600	31	4,246	- 12.4	39	31	3,917	- 24.0	54	31	4,045	- 19.1	60	30	4,278	- 7.7	37	31	3,865	- 29.8	53	31	3,835	- 25.3	56	31	4,054	- 20.1	51
550	30	4,908	- 16.9	37	31	4,546	- 28.3	53	31	4,733	- 23.0	57	30	4,951	- 12.0	40	31	4,487	- 32.7	49	31	4,465	- 30.0	54	31	4,699	- 24.2	51
500	30	5,611	- 21.5	37	31	5,223	- 32.7	51	31	5,420	- 27.3	55	30	5,673	- 16.7	47	31	5,148	- 37.1	46	31	5,132	- 35.2	53	31	5,382	- 28.5	47
450	30	6,392	- 26.7	27	31	5,961	- 37.7	50	30	6,176	- 32.6	55	30	6,465	- 22.0	37	30	5,878	- 42.0	51	31	5,865	- 40.2	51	31	6,136	- 33.7	47
400	30	7,220	- 32.5	27	30	6,764	- 42.5	52	28	6,988	- 36.7	50	30	7,313	- 26.0	38	30	6,658	- 46.9	51	31	6,653	- 45.5	51	31	6,945	- 39.7	51
350	29	8,148	- 38.5	27	30	7,654	- 47.8	52	27	7,897	- 45.0	50	30	8,259	- 34.4	39	30	7,532	- 51.5	51	31	7,533	- 49.7	51	31	7,845	- 45.7	51
300	29	9,190	- 45.7	27	29	8,657	- 52.1	52	27	9,910	- 51.8	50	30	9,320	- 42.0	49	30	8,525	- 54.1	51	31	8,534	- 51.9	51	31	8,858	- 50.7	51
250	28	10,381	- 52.1	27	29	9,829	- 59.2	52	27	10,076	- 56.3	50	29	10,531	- 49.5	49	30	9,694	- 52.9	51	31	9,715	- 50.5	51	31	10,035	- 53.0	51
200	28	11,817	- 53.9	27	28	11,284	- 48.4	51	26	11,502	- 52.8	50	29	11,975	- 54.5	51	30	11,143	- 49.7	51	31	11,175	- 48.2	51	31	11,480	- 50.3	51
175	27	12,677	- 54.7	27	28	12,163	- 47.8	51	26	12,362	- 51.3	51	29	12,826	- 56.1	51	30	12,017	- 49.2	51	30	12,058	- 47.2	51	30	12,348	- 49.1	51
150	27	13,660	- 55.9	27	28	13,179	- 47.8	51	25	13,364	- 51.2	51	28	13,809	- 58.2	51	29	13,025	- 49.6	51	28	13,074	- 47.0	51	28	13,360	- 49.7	51
125	27	14,812	- 58.9	27	28	14,386	- 47.9	51	24	14,553	- 51.8	51	28	14,946	- 62.1	51	29	14,223	- 48.3	51	24	14,271	- 47.6	51	28	14,540	- 51.6	51
100	26	16,198	- 62.4	27	28	15,858	- 48.6	51	22	15,987	- 52.8	51	23	16,312	- 65.0	51	24	15,690	- 48.5	51	22	15,753	- 46.3	51	28	15,986	- 54.1	51
80	26	17,552	- 63.9	27	28	17,322	- 49.7	51	18	17,412	- 54.1	51	20	17,666	- 67.6	51	28	17,176	- 48.6	51	22	17,226	- 47.8	51	27	17,408	- 55.6	51
60	14	19,300	- 62.7	27	19	19,198	- 51.7	51	15	19,250	- 55.7	51	10	19,395	- 65.4	51	27	19,071	- 50.1	51	22	19,115	- 50.3	51	24	19,238	- 57.4	51
50	9	20,417	- 62.1	27	20	20,363	- 52.9	51	13	20,421	- 55.9	51	5	21,819	- 55.1	51	25	20,255	- 50.7	51	21	20,305	- 51.1	51	21	20,388	- 58.0	51
30	---	---	---	27	21	20,363	- 52.9	51	5	23,656	- 55.0	51	5	21,819	- 55.1	51	14	21,687	- 50.6	51	18	21,755	- 51.8	51	16	21,808	- 58.2	51
SURFACE	31	868	- 5.3	82	31	7	- 16.7	82	31	182	- 4.5	82	31	3	- 12.3	86	31	191	- 10.9	76	31	15	- 7.4	80	31	238	- 0.7	70
1000	31	212	- 12.5	82	31	159	- 72.5	75	31	127	- 6.5	82	31	168	- 13.1	74	31	80	- 10.1	61	31	155	- 1.1	65	31	571	- 1.1	65
950	31	621	- 17.5	82	31	598	- 14.4	73	31	531	- 5.8	73	31	600	- 11.1	67	31	479	- 10.4	76	31	583	- 8.6	53	31	571	- 1.1	65
900	31	1,047	- 2.9	72	31	1,051	- 12.4	64	31	953	- 8.1	75	31	1,048	- 9.7	60	31	892	- 10.3	80	31	1,023	- 7.5	48	31	997	- 2.2	61
850	31	1,499	- 4.1	71	31	1,529	- 11.2	55	31	1,395	- 9.6	67	31	1,522	- 8.5	48	31	1,332	- 10.5	79	31	1,492	- 5.9	45	31	1,450	- 3.3	57
800	31	1,973	- 5.8	68	31	2,035	- 10.3	41	31	1,781	- 11.4	65	31	2,022	- 7.2	40	31	1,797	- 11.5	72	31	1,987	- 4.7	40	31	1,928	- 4.1	55
750	31	2,486	- 7.7	65	31	2,577	- 8.1	37	31	2,360	- 13.0	58	31	2,557	- 5.6	34	31	2,296	- 12.7	64	31	2,518	- 2.6	36	31	2,444	- 5.5	50
700	31	3,014	- 9.8	57	31	3,136	- 4.8	38	30	2,877	- 15.2	50	31	3,112	- 2.8	31	31	2,815	- 14.7	59	31	3,066	- 2.2	42	31	2,975	- 7.8	45
650	31	3,590	- 12.9	49	31	3,742	- 1.3	33	30	3,443	- 18.0	48	31	3,706	- 1.4	32	31	3,381	- 17.8	57	31	3,661	- 3.3	42	31	3,555	- 10.5	41
600	31	4,186	- 16.4	47	31	4,376	- 2.7	27	30	4,028	- 21.4	46	31	4,344	- 4.2	35	30	3,969	- 21.1	53	31	4,285	- 6.8	42	31	4,160	- 14.0	40
550	31	4,840	- 20.1	49	31	5,061	- 7.1	31	30	4,669	- 25.3	48	31	5,024	- 8.3	30	29	4,610	- 25.3	51	31	4,965	- 10.7	41	31	4,818	- 18.1	35
500	31	5,538	- 24.8	48	31	5,800	- 13.0	42	31	5,268	- 26.3	48	31	5,129	- 2.3	35	31	5,291	- 29.8	50	31	5,686	- 16.2	38	31	5,521	- 22.9	35
450	30	6,040	- 27.8	37	31	6,447	- 24.3	31	31	6,199	- 3.2	42	31	6,988	- 6.3	70	31	6,761	- 9.7	54	31	7,087	- 10.5	56	31	7,542	- 4.9	55
400	30	7,171	- 33.8	36	31	7,285	- 30.0	31	31	7,177	- 3.4	47	31	6,757	- 44.6	31	31	6,987	- 45.3	51	31	7,057	- 4.4	53	31	7,928	- 45.4	53
350	30	8,094	- 40.3	36	31	8,223	- 36.6	31	31	8,097	- 4.4	47	31	7,641	- 4.1	31	31	7,859	- 45.3	51	31	8,024	- 4.4	53	31	8,940	- 51.8	51
300	30	9,131	- 46.6	37	31	9,371	- 43.6	31	31	9,035	- 7.6	53	31	9,260	- 15.8	52	31	9,217	- 16.0	54	31	9,034	- 10.5	56	31	9,296	- 12.1	63
250	30	11,321	- 52.5	37	31	10,476	- 51.3	31	30	10,314	- 53.0	52	31	10,344	- 19.7	52	31	10,487	- 52.0	54	31	10,304	- 11.6	54	31	10,529	- 15.0	56
200	30	11,754	- 55.1	37	31	12,111	- 55.3	31	28	11,784	- 53.6	52	31	11,265	- 49.2	51	31	11,492	- 50.9	52	31							

RADIOSONDE DATA

Average monthly values

Table 20—Continued

JANUARY 1955

GREEN BAY, WIS. (990 MB.)				GREENSBORO, N. C. (986 MB.)				HATTERAS, N. C. (1017 MB.)				HILO, T. H. (1010 MB.)				INTERN. FALLS, MINN. (971 MB.)				KOTZEBUE, ALASKA (1004 MB.)				LAKE CHARLES, LA. (1020 MB.)					
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity		
SURFACE	31	210	- 6.6	75	31	273	2.2	73	31	6.0	75	31	9	22.6	74	31	360	- 15.0	69	31	5	- 16.9	76	31	5	10.8	82		
1000---	31	131	- 6.6	31	156	- 10.4	61	31	142	6.3	65	31	153	21.1	76	31	135	- 16.9	69	31	34	- 16.9	69	31	140	11.5	73		
4500---	31	534	- 7.9	68	31	571	3.4	54	31	566	4.4	50	31	597	17.6	79	31	529	- 13.4	69	31	432	- 11.4	75	31	594	10.2	60	
9000---	31	949	- 9.1	64	31	1,010	1.6	52	31	1,000	3.3	52	31	1,056	14.2	62	31	937	- 13.1	68	31	839	- 11.3	74	31	1,047	1.1	60	
8500---	31	1,391	- 9.6	55	31	1,469	- 5.5	51	31	1,462	1.9	47	31	1,597	11.1	66	31	1,372	- 13.3	66	31	1,276	- 12.4	72	31	1,520	8.0	48	
8000---	31	1,857	- 11.0	50	31	1,955	- 6.4	49	31	1,950	- 5.5	47	31	2,043	9.6	66	31	1,833	- 14.0	64	31	1,737	- 13.9	66	31	2,010	6.7	39	
7500---	31	2,356	- 13.0	48	31	2,475	- 2.2	44	31	2,474	- 1.2	45	31	2,567	7.6	46	31	2,331	- 15.9	63	31	2,233	- 16.6	63	31	2,555	4.9	39	
7000---	31	2,875	- 14.7	48	31	3,015	- 4.1	42	31	3,014	- 3.5	43	31	3,143	5.1	51	31	2,880	- 17.7	56	31	2,739	- 18.2	58	31	3,077	2.1	39	
6500---	31	3,440	- 17.2	47	31	3,602	- 7.6	40	31	3,604	- 6.4	41	31	3,747	1.7	51	31	3,398	- 20.2	54	31	3,294	- 23.2	53	31	3,434	- 1.3	38	
6000---	31	4,030	- 20.3	47	31	4,215	- 10.4	41	31	4,219	- 10.1	42	31	4,386	- 1.7	51	31	3,978	- 23.4	51	31	3,866	- 26.8	46	31	5,014	- 9.1	37	
5500---	31	4,674	- 24.0	46	31	4,884	- 14.3	44	31	4,890	- 14.3	44	31	5,075	- 5.7	51	31	4,612	- 27.0	50	31	4,493	- 31.3	46	31	5,743	- 13.9	35	
5000---	31	5,359	- 28.0	41	29	5,604	- 19.0	49	31	5,601	- 18.5	46	31	5,815	- 10.3	51	31	5,290	- 31.5	49	31	5,156	- 36.1	45	27	6,549	- 19.0	31	
4500---	31	6,110	- 33.1	29	6,390	- 23.7	47	31	6,390	- 23.1	46	31	6,627	- 15.7	51	31	6,034	- 36.7	50	31	5,864	- 41.1	46	26	7,407	- 25.6	31		
4000---	31	6,926	- 38.5	28	7,230	- 29.5	44	31	7,234	- 28.7	44	31	7,497	- 21.7	51	31	6,833	- 42.4	51	31	6,670	- 46.1	41	26	8,361	- 32.2	31		
3500---	31	7,830	- 44.1	28	8,169	- 36.3	46	31	8,177	- 35.3	31	8,467	- 28.6	51	31	7,725	- 47.3	51	31	7,549	- 50.8	46	24	9,429	- 40.4	40			
3000---	31	8,652	- 46.9	25	9,228	- 43.7	31	9,234	- 42.3	31	9,554	- 35.8	29	8,745	- 50.6	51	31	8,178	- 52.1	51	24	10,646	- 49.0	49					
2500---	30	10,049	- 50.4	24	10,430	- 50.5	51	31	10,445	- 49.5	51	31	10,796	- 44.0	51	29	9,930	- 50.4	51	31	11,173	- 48.6	51	24	12,007	- 54.4	44		
2000---	30	11,559	- 54.0	24	11,870	- 54.0	51	30	11,892	- 53.0	51	31	12,263	- 53.6	51	27	11,403	- 48.6	51	31	12,051	- 48.2	51	23	12,936	- 56.2	51		
1750---	30	12,385	- 48.6	24	12,724	- 54.9	51	30	12,744	- 54.4	51	31	13,111	- 59.1	51	27	12,281	- 48.2	51	31	13,067	- 48.8	51	22	13,905	- 59.1	51		
1500---	30	13,395	- 50.0	23	13,701	- 56.4	51	30	13,732	- 56.4	51	29	14,062	- 65.4	51	27	13,294	- 49.0	51	31	14,270	- 47.3	51	21	15,036	- 63.6	51		
1250---	30	14,585	- 52.1	23	14,851	- 59.6	51	30	14,879	- 59.9	51	28	15,157	- 70.9	51	26	14,481	- 50.5	51	31	15,147	- 47.3	51	19	16,389	- 68.1	51		
1000---	28	16,026	- 54.7	22	16,233	- 63.5	51	28	16,258	- 63.9	51	24	16,455	- 76.9	51	22	15,931	- 52.8	51	31	16,247	- 57.7	51	15	17,710	- 68.9	51		
800---	26	17,451	- 56.7	19	17,584	- 64.8	51	25	17,604	- 65.2	51	11	17,713	- 77.9	51	16	19,252	- 56.6	51	31	19,113	- 49.5	51	8	19,389	- 66.7	51		
600---	22	19,264	- 58.1	14	19,347	- 64.0	51	21	19,355	- 64.7	51	30	19,362	- 50.1	51	13	20,365	- 57.2	51	20	20,390	- 50.1	51	5	20,496	- 65.2	51		
50---	19	20,409	- 58.3	14	20,464	- 63.2	51	20	20,478	- 63.5	51	11	21,797	- 57.4	51	9	21,797	- 56.8	51	23	23,602	- 51.5	51	5	23,602	- 51.5	51		
30---	12	21,830	- 58.3	6	23,597	- 61.8	51	11	23,659	- 61.5	51	6	23,659	- 61.5	51	6	23,659	- 56.8	51	6	23,659	- 56.8	51	6	23,659	- 56.8	51		
LANDER, WYO. (825 MB.)				LAS VEGAS, NEV. (941 MB.)				LITTLE ROCK, ARK. (1010 MB.)				MAZATLAN, MEXICO (1014 MB.)				MC GRATH, ALASKA (989 MB.)				MEDFORD, ORE. (973 MB.)				MIAMI, FLA. (1019 MB.)					
SURFACE	31	1,696	- 5.6	54	31	660	4.9	58	30	79	6.0	68	31	14	19.1	78	31	103	- 16.0	78	31	401	2.4	88	31	4	17.0	79	
1000---	31	156	- 5.6	54	31	161	- 6.8	62	31	162	6.8	62	31	130	18.4	76	31	17	- 17.2	73	31	597	3.6	73	31	601	15.7	67	
950---	31	571	- 5.6	54	30	588	5.1	56	31	582	19.2	55	31	416	- 12.2	73	31	1,033	2.7	65	31	1,057	13.3	63					
8500---	31	1,007	- 5.6	54	31	1,026	5.7	44	30	1,023	3.9	52	31	1,035	16.5	53	31	824	8.3	69	31	1,033	11.6	50					
8000---	31	1,462	- 2.7	45	31	1,493	2.8	46	30	1,486	2.4	47	31	1,519	13.5	53	31	1,267	- 8.9	62	31	1,494	1.0	53	31	1,536	11.6	50	
7500---	31	1,942	- 2.7	45	31	1,981	- 1.1	50	31	1,975	1.4	45	31	2,027	- 10.7	51	31	1,735	- 11.1	63	31	1,979	1.6	57	31	2,041	10.2	55	
7000---	31	2,454	- 5.0	43	31	2,501	- 2.6	46	30	2,504	- 5.8	43	31	2,574	7.1	51	31	2,234	- 14.0	65	31	2,495	- 4.2	54	31	2,583	8.8	56	
6500---	31	2,990	- 8.4	44	31	3,039	- 5.5	45	30	3,041	- 3.1	41	31	3,126	3.6	51	31	2,747	- 17.5	64	31	3,031	- 7.4	40	31	3,145	- 4.9	50	
6000---	31	3,565	- 12.3	45	31	3,620	- 8.9	40	30	3,632	- 5.9	51	31	3,729	- 5.5	51	31	3,307	- 21.4	61	31	3,610	- 10.7	47	31	3,449	- 3.0	50	
5500---	31	4,168	- 16.0	40	31	4,232	- 13.0	34	30	4,246	- 9.5	51	30	4,362	- 3.3	51	31	3,883	- 25.6	61	31	4,216	- 14.4	45	31	3,933	- 4.4	51	
5000---	31	4,818	- 19.8	40	31	4,894	- 17.5	32	30	4,920	- 13.5	35	30	5,047	- 7.5	51	31	4,513	- 29.9	57	31	4,874	- 16.8	41	31	5,081	- 9.7	51	
4500---	31	5,518	- 24.9	37	31	5,596	- 22.7	37	30	5,634	- 18.1	37	30	5,781	- 12.3	38	31	5,180	- 34.6	54	31	5,347	- 22.8	58	31	5,436	- 9.7	51	
4000---	31	6,448	- 29.4	37	31	6,490	- 27.4	37	30	6,495	- 25.4	37	30	6,625	- 23.5	39	31	6,702	- 44.7	51	31	7,153	- 34.4	51	31	7,475	- 29.7	51	
3500---	31	7,094	- 35.6	41	31	7,206	- 30.6	40	30	6,661	- 46.4	41	30	6,813	- 43.5	51	31	7,699	- 48.9	51	31	7,962	- 43.9	51	29	8,126	- 41.1	51	
3000---	30	8,260	- 35.1	41	31	8,792	- 40.9	36	30	8,139	- 36.3	41	30	7,537	- 51.1	51	30	8,698	- 48.9	51	31	8,982	- 49.4	46	26	9,147	- 46.2	51	
3000---	30	9,317	- 42.8	42	31	9,829	- 45.5	39	30	9,192	- 42.3	43	30	9,5															

RADIOSONDE DATA

Average monthly values

Table 20—Continued

JANUARY 1955

OKLAHOMA CITY, OKLA. (973 MB.)				OMAHA, NEBR. (1069 MB.)				PHOENIX, ARIZ. (978 MB.)				PITTSBURGH, PA. (1975 MB.)				PORTLAND, ME. (1009 MB.)				RAPID CITY, S. DAK. (902 MB.)				ST. CLOUD, MINN. (977 MB.)				
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
SURFACE	31	391	3.2	75	31	403	-5.5	78	31	341	9.7	67	31	353	-2.8	73	30	20	-6.1	69	31	966	-4.7	65	31	316	-11.7	76
1000	31	164			31	152			31	157			31	148			30	90	-5.5	62	31	140			31	139		
950	31	583	4.9	61	31	500	-3.9	70	31	590	11.3	48	31	560	-3.5	70	30	496	6.5	59	31	552			31	536	-10.6	71
900	31	1,023	4.1	55	31	984	-3.9	66	31	1,035	8.6	46	31	982	-5.8	68	30	913	-7.6	60	31	982	-4.7	64	31	950	-10.1	67
850	31	1,466	2.4	51	31	1,435	-3.9	56	31	1,505	5.4	48	31	1,428	-7.3	63	30	1,357	-8.7	56	31	1,434	-2.7	54	31	1,391	-10.7	58
800	31	1,975	1.1	42	31	1,912	-5.3	52	31	1,997	2.1	48	31	1,899	-8.3	54	30	1,825	-10.1	51	31	1,913	-4.7	51	31	1,858	-10.3	56
750	31	2,496	-1.6	38	31	2,425	-7.3	49	31	2,524	-1.0	45	31	2,406	-9.8	50	30	2,326	-12.3	49	31	2,421	-7.9	53	31	2,360	-12.0	51
700	31	3,040	-3.8	38	31	2,952	-9.3	48	31	3,062	-3.9	42	31	2,929	-12.0	50	30	2,845	-14.7	48	31	2,951	-10.8	49	31	2,879	-14.2	52
650	31	3,625	-6.8	38	30	3,532	-12.4	45	31	3,652	-7.1	36	31	3,500	-13.7	47	30	3,412	-17.5	46	31	3,521	-14.2	49	31	3,445	-16.5	51
600	31	4,241	-10.4	38	30	4,129	-16.2	43	31	4,263	-10.8	36	31	4,095	-18.0	50	30	4,000	-20.4	43	31	4,120	-17.7	50	31	4,036	-19.9	51
550	31	4,911	-14.4	38	30	4,763	-20.5	43	31	4,932	-15.1	36	31	4,745	-21.6	54	30	4,641	-24.2	41	31	4,768	-22.1	49	31	4,681	-23.9	51
500	31	5,622	-19.4	40	30	5,476	-25.3	41	30	5,642	-20.1	31	31	5,436	-26.1	52	30	5,328	-28.8	31	31	5,460	-26.9	47	31	5,336	-28.6	48
450	31	6,406	-24.9	40	30	6,244	-30.6	42	30	6,426	-25.5	31	6,194	-31.3	46	30	6,061	-33.6	31	6,210	-32.2	47	30	6,121	-33.5	43		
400	31	7,242	-30.9	41	30	7,059	-36.3	30	7,258	-31.6	31	7,016	-36.3	30	6,892	-38.9	31	7,034	-37.8	49	29	6,932	-39.1					
350	31	8,176	-37.7	37	30	7,973	-42.3	30	8,189	-38.1	31	7,931	-41.9	29	7,793	-43.8	30	7,936	-44.7	29	7,863	-45.4						
300	31	9,222	-45.1	31	9,001	-51.6	30	9,234	-44.6	31	8,960	-47.7	28	8,822	-47.4	30	8,953	-50.2	29	8,847	-50.4							
250	31	10,419	-51.6	26	10,170	-52.7	30	10,354	-51.5	31	10,151	-51.6	28	10,022	-48.5	30	10,131	-53.6	29	10,029	-51.7							
200	31	11,856	-54.0	27	11,595	-51.5	30	11,870	-54.3	29	11,599	-51.1	28	11,489	-48.1	30	11,569	-51.7	28	11,480	-49.9							
175	30	12,712	-54.4	27	12,452	-51.1	30	12,726	-54.4	29	12,467	-51.7	28	12,368	-46.6	30	12,437	-50.8	28	12,353	-49.7							
150	29	13,699	-56.2	27	13,460	-52.3	27	13,711	-56.0	29	13,461	-53.7	27	13,374	-49.9	30	13,439	-51.0	27	13,352	-50.0							
125	29	14,850	-58.9	26	14,629	-54.8	25	14,862	-59.4	24	14,613	-56.0	26	14,570	-51.5	27	14,626	-52.7	27	14,536	-51.8							
100	28	16,231	-62.6	25	16,059	-57.0	24	16,247	-62.9	19	16,023	-59.7	24	16,012	-54.3	25	16,064	-55.1	25	15,989	-54.0							
80	25	17,508	-64.2	24	17,467	-59.5	19	17,611	-63.8	12	17,426	-59.4	20	17,435	-56.2	21	17,484	-57.2	24	17,405	-55.8							
60	16	19,358	-63.2	19	19,255	-60.8	15	19,367	-63.3	5	19,298	-61.5	20	19,264	-58.5	20	19,298	-58.5	16	19,230	-57.8							
50	13	20,472	-62.8	15	20,379	-61.2	11	20,488	-63.1	5	20,481	-60.2	16	20,452	-58.4	15	20,451	-59.2	17	20,376	-58.3							
30	5	21,844	-62.0	8	21,689	-60.3	6	21,889	-62.9	14	21,819	-58.6	11	21,860	-58.3	11	21,813	-57.8										
SAN ANTONIO, TEX. (991 MB.)	SAN JUAN, P. R. (1015 MB.)	SANTA MARIA, CALIF. (1011 MB.)	S. STE. MARIE, MICH. (988 MB.)	SPOKANE, WASH. (934 MB.)	SWAN ISLAND, N. I. (1015 MB.)	TAMPA, FLA. (1019 MB.)																						
SURFACE	31	243	11.6	60	31	19	23.2	77	31	74	7.8	78	31	221	-7.8	80	31	722	-2.4	89	31	10	24.4	77	31	7	13.6	85
1000	31	164			31	145	-22.0	73	31	163	0.2	73	31	125			31	176			31	140	24.0	76	31	169	15.0	76
950	31	597	11.4	59	31	595	19.8	76	31	569	8.7	55	31	522	8.4	71	31	593			31	516	24.0	60	31	604	13.2	67
900	31	1,046	10.1	54	31	1,055	16.3	79	31	1,034	6.6	48	31	942	-10.1	76	31	1,018	-2.8	81	31	1,054	17.5	79	31	1,057	11.7	64
850	31	1,519	8.1	53	31	1,540	13.7	73	31	1,500	4.1	47	31	1,380	-11.7	70	31	1,463	-3.9	76	31	1,543	14.5	75	31	1,534	10.5	50
800	31	2,019	6.8	46	31	2,049	-12.2	50	31	1,991	1.6	48	31	1,843	-13.5	64	31	1,946	-5.0	71	31	2,052	12.8	57	31	2,037	9.2	43
750	31	2,558	4.5	41	31	2,600	-11.2	29	31	2,513	-1.2	36	31	2,336	-15.4	54	31	2,457	-8.1	65	31	2,602	10.8	38	31	2,582	7.4	
700	31	3,106	1.6		31	3,163	6.9		31	3,055	-4.4	51	31	2,851	-17.6	55	31	2,985	-10.7	62	31	3,146	8.2		31	3,136	4.7	
650	31	3,705	-1.7		31	3,594	5.5		31	3,640	-6.3	32	31	3,411	-19.2	51	31	3,551	-13.8	59	31	3,782	5.6		31	3,745	1.6	
600	31	4,333	-5.5		30	4,424	-2.1		31	4,251	-12.5	32	30	3,992	-23.1	50	31	4,153	-17.4	59	31	4,425	2.2		31	4,377	-1.8	
550	31	5,013	-9.6		30	5,121	-2.3		31	4,910	-17.2	32	30	4,630	-26.9	53	31	4,805	-21.0	55	31	5,023	-1.8		31	5,070	-10.8	
500	31	5,740	-14.6		30	5,870	-7.4		31	5,617	-22.3	32	29	5,312	-30.9	51	31	5,446	-26.1	54	31	5,873	-8.1		31	5,803	-10.8	
450	31	6,542	-20.0	41	30	6,693	-13.0		31	6,388	-27.7	28	28	6,076	-35.5	57	30	6,161	-31.0	53	30	6,703	-12.2		31	6,616	-16.5	
400	31	7,393	-26.1	41	30	7,493	-19.6		31	7,210	-34.0	25	25	6,876	-40.0	57	30	7,097	-37.1	56	30	7,578	-18.6		31	7,479	-23.2	27
350	31	8,410	-32.8	42	30	8,584	-27.1		31	8,141	-40.2	24	24	7,823	-44.1	51	30	8,058	-46.7	50	30	8,443	-30.4		30	8,455	-34.6	
300	31	9,410	-38.6	42	30	9,441	-32.8		31	9,172	-46.2	35	31	8,261	-40.7	59	30	10,780	-55.6	29	30	10,699	-44.1		30	10,746	-47.2	
250	31	10,464	-45.4	42	30	10,524	-38.5		31	10,346	-46.0	30	29	9,052	-45.3	51	31	12,449	-53.4	23	31	12,214	-58.2		28	11,595	-55.5	
200	28	10,204	-55.1	28	10,846	-46.0		29	10,252	-50.5	31	10,193	-51.2	21	13,445	-53.1	23	14,700	-64.1	26	13,992	-62.0		10	14,646	-55.9		
175	25	11,616	-55.3	28	12,296	-56.0		28	11,692	-51.2	31	11,398	-49.6	21	12,272	-49.3	23	13,282	-49.1	22	14,433	-71.7		9	17,636	-80.5		
150	25	12,470	-53.3	28	13,136	-60.1		27	12,564	-51.2	31	12,272	-49.3	21	12,272	-49.3	23	13,282	-49.1	22	14,434	-73.9		11	17,694	-84.4		
125	24	14,634	-53.2	23	15,188	-69.9		26	14,719	-55.8	31	14,478	-48.8	11	17,563	-51.2	29	17,391	-51.2	26	18,059	-6						

RADIOSONDE DATA

Average monthly values

Table 20 *Air Force Data for September 1954

Standard pressure surface (mb)	DENVER, COLO. (034 mb.)				FT. WORTH, TEXAS (992 mb.)				OGDEN, UTAH (853 mb.)				RANTOUL, ILL. (989 mb.)				ROME, N. Y. (957 mb.)			
	Number of observations		Dynamic height	Temperature	Number of observations		Dynamic height	Temperature	Number of observations		Dynamic height	Temperature	Number of observations		Dynamic height	Temperature	Number of observations		Dynamic height	Temperature
SURFACE	30	1,661	18.4	44	30	178	27.6	45	30	1,450	18.4	36	30	227	19.5	68	30	146	12.7	82
1000--	30	564	-	-	30	109	-	-	30	58	-	-	30	128	-	-	30	127	11.1	-
900--	30	526	-	-	30	568	27.7	39	30	520	-	-	30	576	21.7	54	30	559	13.1	79
800--	30	1,000	-	-	30	1,042	24.3	43	30	992	-	-	30	1,042	19.1	50	30	1,014	11.0	77
700--	30	1,493	-	-	30	1,540	20.3	48	30	1,481	19.4	36	30	1,530	16.3	46	30	1,489	8.5	76
600--	30	2,016	19.3	39	30	2,060	16.6	50	30	2,002	17.3	33	30	2,043	12.9	50	30	1,989	6.4	68
500--	30	2,572	15.5	42	30	2,611	12.8	52	30	2,551	13.3	34	30	2,589	9.8	49	30	2,519	3.5	66
400--	30	3,148	11.2	45	30	3,182	9.3	46	30	3,124	8.7	39	30	3,153	6.5	47	30	3,073	1.3	58
300--	30	3,765	6.4	49	30	3,800	6.0	35	30	3,734	3.7	45	30	3,761	2.6	46	30	3,668	-2.0	53
200--	30	4,412	1.2	54	30	4,445	2.5	-	30	4,376	-1.3	48	30	4,400	-1.3	44	30	4,299	5.5	45
550--	30	5,104	-4.3	59	30	5,146	-1.7	-	30	5,063	-6.4	47	30	5,086	-5.1	35	30	4,979	-9.0	39
500--	30	5,850	-9.6	55	30	5,895	-6.4	-	30	5,801	-11.6	41	30	5,831	-9.8	-	30	5,709	-13.4	36
450--	30	6,668	-14.8	48	30	6,719	-11.9	-	30	6,607	-17.1	-	30	6,644	-15.6	-	30	6,509	-16.8	-
400--	30	7,538	-20.9	39	30	7,602	-18.4	-	30	7,472	-23.5	-	30	7,515	-21.6	-	30	7,370	-24.9	-
350--	30	8,509	-28.5	-	29	8,584	-26.0	-	30	8,454	-30.9	-	30	8,483	-29.2	-	30	8,326	-32.0	-
300--	29	9,598	-37.1	-	29	9,680	-34.6	-	30	9,510	-38.7	-	30	9,565	-37.7	-	30	9,397	-39.7	-
250--	29	10,832	-46.1	-	29	10,929	-43.9	-	30	10,739	-47.1	-	29	10,796	-47.1	-	30	10,620	-47.8	-
200--	29	12,286	-54.5	-	29	12,391	-54.8	-	28	12,195	-54.2	-	29	12,242	-55.7	-	29	12,066	-54.2	-
175--	29	13,131	-58.7	-	29	13,234	-60.2	-	26	13,046	-57.0	-	29	13,085	-59.1	-	27	12,912	-55.9	-
150--	27	14,083	-62.6	-	28	14,181	-66.1	-	27	14,017	-60.0	-	27	14,044	-61.8	-	25	13,886	-57.9	-
125--	27	15,195	-66.2	-	25	15,274	-70.9	-	26	15,149	-62.2	-	23	15,175	-64.3	-	24	15,032	-59.5	-
100--	24	16,545	-66.3	-	16	16,581	-71.7	-	26	16,524	-63.0	-	17	16,532	-63.9	-	23	16,428	-59.9	-
80--	22	17,897	-64.4	-	12	17,907	-67.1	-	24	17,896	-61.3	-	14	17,897	-62.4	-	21	17,830	-59.2	-
60--	19	19,677	-59.6	-	9	19,666	-61.4	-	22	19,691	-58.6	-	7	19,708	-58.4	-	20	19,638	-56.2	-
50--	19	20,820	-57.8	-	8	20,796	-58.7	-	21	20,844	-57.0	-	-	-	-	-	19	20,793	-55.0	-
40--	19	22,237	-54.7	-	7	22,208	-56.8	-	16	22,269	-55.1	-	-	-	-	-	16	22,213	-53.2	-
30--	17	24,082	-51.6	-	6	24,034	-53.7	-	10	24,151	-52.2	-	-	-	-	-	15	24,066	-51.1	-
20--	9	26,754	-47.6	-	-	-	-	-	8	26,796	-48.5	-	-	-	-	-	5	26,726	-47.7	-

* October data for the above Air Force stations will be included in the February 1955 issue of this publication.

Note: All observations scheduled at 0300, G.C.T. "Number of observations" refers to those of dynamic height only. Temperature and humidity data may be missing for one or more pressure surfaces of some observations. The temperature values are based on 15 or more observations at the surface or 5 observations at a standard pressure level. Relative humidity data are not published for standard pressure surfaces having less than 16 actual observations.

values of relative humidity at levels with temperatures less than 0°C, have formerly been computed and expressed on the basis of the vapor-pressure over ice. All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the value occurring below the operating range of the humidity element.

These average values for standard pressure surfaces were obtained by radiosondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees centigrade and relative humidity in percent.

PILOT BALLOON DATA

Average monthly resultant winds

Table 21

JANUARY 1955

* Rawin Data

**** Rawin Data (Cont'd.)**

*** Rawin Data (Cont'd.)**

18,000 m., 16 obs., 270 dir., 9.0 speed
 20,000 m., 15 obs., 276 dir., 3.8 speed
 22,000 m., 12 obs., 262 dir., 2.8 speed

18,000 m., 17 obs., 268 dir., 19.4 speed
 20,000 m., 19 obs., 277 dir., 8.2 speed
 22,000 m., 20 obs., 246 dir., 7.4 speed

These free air resultant winds are based on pilot balloon observations made near 2100 G.C.T.; directions in degrees from north ($N = 360^\circ$, $E = 90^\circ$, $S = 180^\circ$, $W = 270^\circ$); speeds in meters per second.

RAWIN DATA

Average monthly resultant winds

Table 22

JANUARY 1955

Altitude (meters) m.s.l.		Albuquerque, N. Mex. (1,630 m.)		Anchorage, Alaska (30 m.)		Annette, Alaska (37 m.)		Barrow, Alaska (8 m.)		Bismarck, N. Dak. (505 m.)		Brownsville, Tex. (7 m.)		Buffalo, N. Y. (182 m.)		Burwood, La. (3 m.)		Caribou, Me. (191 m.)		Charleston, S. C. (13 m.)		Columbus, Mo. (237 m.)		Fairbanks, Alaska (135 m.)			
No. of observations	Direction	No. of observations	Speed	No. of observations	Direction	No. of observations	Speed	No. of observations	Direction	No. of observations	Speed	No. of observations	Direction	No. of observations	Speed	No. of observations	Direction	No. of observations	Speed	No. of observations	Direction	No. of observations	Speed	No. of observations	Direction	No. of observations	Speed
Surface-----	31 13	1.2	31 198	0.3	26 137	3.5	31 54	3.2	31 336	1.2	31 114	1.9	30 239	2.6	31 12	2.6	31 302	4.3	31 229	0.6	31 261	1.1	31 315	0.2	31 315	0.2	
500-----	31 111	2.6	28 154	6.2	31 44	4.6	31 30	5.3	29 271	5.6	30 154	5.3	30 232	1.0	30 236	5.8	29 273	4.4	31 253	3.3	31 299	10.4	31 299	12.9			
1,000-----	31 138	6.5	27 180	5.8	31 87	3.7	30 240	5.4	29 174	4.6	29 280	7.9	30 278	3.3	30 341	5.9	27 274	7.5	31 261	2.4	31 260	22.4	31 260	1.9			
1,500-----	31 138	8.3	25 211	3.9	31 97	2.5	29 298	6.5	30 199	3.6	29 281	4.1	30 261	5.6	30 338	5.7	28 279	10.1	31 244	2.4	31 244	8.0	31 244	16.1			
2,000-----	31 292	2.6	31 155	9.4	25 226	5.0	30 30	11.0	29 301	10.4	29 239	4.4	30 244	10.0	29 265	6.8	30 328	5.1	28 277	12.7	31 244	2.7	31 244	11.5	31 244	19.8	
2,500-----	31 276	5.3	31 164	9.2	25 228	5.7	30 164	1.0	28 301	1.7	30 284	6.7	30 262	14.9	29 267	6.7	30 307	5.7	30 212	14.6	31 277	15.2	31 277	19.5	31 277	6.5	
3,000-----	31 279	6.3	31 173	9.9	23 236	5.0	30 177	1.4	29 297	12.9	30 247	8.0	29 262	14.0	29 263	10.9	30 281	5.7	29 270	16.6	30 277	15.2	30 198	7.3			
4,000-----	30 278	9.4	29 173	10.2	28 260	6.3	29 206	2.1	26 241	15.0	20 280	4.4	29 283	18.2	29 263	14.3	28 274	5.8	23 270	20.5	30 276	19.3	30 199	10.4			
5,000-----	27 271	11.7	28 190	10.5	27 276	10.0	29 208	3.9	23 285	15.0	20 280	19.6	29 263	17.9	27 275	7.2	15 271	24.0	31 275	22.4	31 275	26.6	31 275	12.5			
6,000-----	20 284	15.2	28 205	11.9	18 205	10.1	19 211	20.9	4.9	21 287	17.5	30 284	16.5	26 289	27.1	20 264	21.1	17 245	8.9	10 292	26.6	31 275	33.8	31 275	20.5		
8,000-----	14 288	18.6	19 208	13.4	13 271	11.8	20 221	7.5	15 272	21.1	22 254	21.4	25 267	33.5	15 270	20.6	23 228	6.9	14 273	19.2	31 273	10.0	31 273	20.0			
10,000-----	17 199	11.8	18 218	9.9	11 278	17.8	14 262	24.9	20 262	36.0	15 270	21.2	22 260	19.0	15 270	19.7	19 276	1.0	8 200	40.7	15 270	1.5	15 270	20.5			
12,000-----	16 202	12.1	28 224	11.1	15 271	11.1	15 271	15.2	27 29	20.6	15 271	15.2	27 271	19.7	15 271	19.7	26 270	40.7	15 270	1.5	15 270	22.5	15 270	6.9			
14,000-----	11 197	9.5	28 221	12.4	1	13 280	20.4	18 243	9.7	1	18 243	9.7	18 243	9.7	18 243	9.7	26 270	24.5	14 222	8.6	26 270	24.5	14 222	8.6			
16,000-----	27 273	12.1	27 223	12.1	1	16 280	11.7	26 278	11.7	1	16 280	5.0	16 280	5.0	16 280	5.0	26 260	13.3	13 217	8.9	26 260	13.3	13 217	8.9			
18,000-----	25 270	11.5	25 220	11.5	10 287	11.1	12 271	11.1	12 271	11.1	12 271	11.1	12 271	11.1	12 271	11.1	17 264	7.3	11 234	3.2	17 264	7.3	11 234	3.2			
22,000-----	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1	10 287	11.1			
Grand Junc tion, Colo. (1,473 m.)		Greensboro (275 m.)		Hatteras, N. C. (3 m.)		Int. Falls, N. C. (3 m.)		Little Rock, Ark. (80 m.)		Medford, Ore. (401 m.)		Miami, Fla. (4 m.)		Midland, Tex. (871 m.)		Nantucket, Mass. (14 m.)		Nashville, Tenn. (180 m.)		Nome, Alaska (7 m.)		Oakland, Calif. (8 m.)					
Surface-----	31 357	0.9	31 308	1.2	31 307	3.3	31 257	0.9	31 206	0.6	31 31	141	0.6	31 346	0.8	31 183	1.4	31 31	321	5.0	31 260	1.2	30 62	4.2	31 108	0.3	
500-----	31 301	3.5	30 314	6.0	30 301	2.3	31 252	3.2	31 146	0.8	31 251	25	7.1	31 31	9.9	30 263	4.5	26 89	7.8	31 338	1.6	31 338	2.9				
1,000-----	31 301	5.5	30 301	7.5	30 280	3.2	31 265	5.2	31 158	1.9	31 285	1.9	31 195	2.3	31 321	10.2	30 273	7.9	27 100	6.9	31 330	2.9					
1,500-----	30 356	9.1	29 282	7.6	30 209	9.6	31 271	4.4	31 274	8.3	31 207	2.4	31 262	3.4	31 226	5.3	31 311	10.1	28 282	8.3	26 114	7.0	31 323	3.2			
2,000-----	30 249	1.1	29 279	9.3	29 281	12.7	31 271	282	5.7	29 275	10.3	30 262	2.7	31 274	5.0	31 254	6.9	31 297	11.8	27 271	10.1	26 121	7.6	31 317	4.2		
2,500-----	28 215	3.8	29 275	12.1	29 271	14.8	31 281	7.9	26 276	11.2	30 294	4.1	31 274	6.1	31 264	8.0	30 284	13.9	27 272	12.2	25 135	7.4	31 319	4.6			
3,000-----	30 237	5.8	29 276	14.5	28 277	17.3	31 290	10.0	23 280	12.3	30 308	5.4	31 273	7.5	31 264	9.0	29 283	15.5	27 275	14.3	25 145	7.4	31 315	5.3			
4,000-----	31 273	7.7	29 274	17.6	22 283	23.1	31 291	13.4	21 270	15.6	29 319	6.0	31 263	11.2	30 260	12.6	26 275	17.5	18 251	18.1	25 161	6.2	31 317	7.4			
5,000-----	30 290	10.2	25 268	20.6	16 279	25.9	31 291	15.9	17 265	18.6	29 316	10.8	31 264	14.7	30 260	17.0	19 285	19.0	19 282	21.4	24 157	5.7	30 322	6.1			
6,000-----	18 298	14.0	21 267	23.1	31 266	18.2	13 277	17.5	29 316	12.2	29 264	16.3	28 256	20.7	19 271	22.9	18 268	15.1	17 256	26.0	23 163	4.7	29 327	11.7			
8,000-----	18 290	17.8	10 276	28.1	30 288	23.3	22 302	15.0	27 266	19.7	19 261	25.9	22 302	15.0	27 266	19.7	19 261	25.9	23 178	5.4	23 335	16.8					
10,000-----	10 299	14.5	27 283	25.6	26 279	20.0	17 288	19.4	21 276	21.0	17 278	23.6	17 278	23.6	17 278	23.6	16 280	11.6	16 331	13.6	16 331	13.6					
12,000-----	26 279	15.8	26 284	15.8	21 284	15.8	13 276	21.9	11 297	21.9	11 297	16.1	11 297	16.1	11 297	16.1	13 180	14.7	13 302	15.9	12 189	16.9	12 299	13.3			
14,000-----	16 274	12.0	21 282	12.0	11 292	12.0	30 294	6.5	24 241	4.3	31 245	9.0	31 337	5.0	31 293	8.1	31 276	5.9	25 281	25.5	15 295	20.8	15 295	6.8			
16,000-----	11 266	38.1	12 251	22.2	13 276	15.8	25 200	13.0	30 297	14.2	30 248	9.9	31 326	5.1	31 288	6.7	25 286	28.6	6.0	31 287	16.7	21 211	6.5				
18,000-----	10 245	16.8	8 276	14.9	25 204	13.8	29 279	10.3	11 285	29 279	10.3	11 285	15.5	17 301	13.8	16 298	9.0	31 280	20.8	27 226	9.5						
20,000-----	12 281	10.6	24 200	15.1	28 304	8.3	12 278	11.9	26 304	18.4	30 330	6.2	25 271	31.4	20 296	10.0	24 296	9.9	30 275	25.0	27 235	11.1					
22,000-----	13 279	6.1	25 189	12.9	25 61	3.2	13 289	25.9	14 63	1.0	10 35	1.4	29 307	18.4	17 285	16.3	23 276	50.6	21 251	16.3	21 251	16.3					
	10 245	16.8	8 276	14.9	25 204	13.8	29 279	10.3	11 285	29 279	10.3	11 285	15.5	17 301	13.8	16 298	10.0	19 278	35.9	20 251	12.3						
	12 281	10.6	24 200	15.1	28 304	8.3	12 278	11.9	26 304	18.4	30 330	6.2	25 271	31.4	20 296	10.0	24 296	9.9	30 275	25.0	27 235	11.1					
	13 279	6.1	25 189	12.9	25 61	3.2	13 289	25.9	14 63	1.0	10 35	1.4	29 307	18.4	17 285	16.3	23 276	50.6	21 251	16.3	21 251	16.3					
	14 63	1.0	10 35	1.4	12 268	8.5	12 268	1.9	12 268	1.9	12 268	1.9	12 268	1.9	12 268	1.9	10 325	4.1	12 272	10.4	16 269	5.1					

These free-air resultant winds are based on rawin observations made near 0300 G.C.T.; directions in degrees from north ($N = 360^\circ$, $E = 90^\circ$, $S = 180^\circ$, $W = 270^\circ$); speeds in meters per second.

when the number of observations missing is greater than three. See note following Table 22 in the January 1950 issue of the CLIMATOLOGICAL DATA, National Summary.

RAWIN DATA

Average monthly resultant winds

Table 22 *Air Force Data for September 1954

Altitude (meters) m.s.l.	Denver, Colo. (1,661 m.)		Ft. Worth, Tex. (178 m.)		Ogden, Utah (1,450 m.)		Bantouli, Ill. (227 m.)		Rome, N. Y. (146 m.)			
	No. of observations		No. of observations		No. of observations		No. of observations		No. of observations		Speed	
		Direction		Speed		Direction		Speed		Direction		
Surface-----	29	180	0.8	30	171	0.9	30	110	1.6	30	253	
500-----	-	-	-	28	140	6.3	-	-	-	28	211	
1,000-----	-	-	-	29	139	5.8	-	-	-	28	240	
1,500-----	-	-	-	28	147	3.9	28	107	2.0	28	255	
2,000-----	27	217	1.1	30	152	3.3	28	195	3.1	27	267	
2,500-----	27	240	1.3	30	170	2.0	28	231	3.7	27	276	
3,000-----	27	243	2.4	30	183	1.7	27	238	5.4	28	286	
4,000-----	28	258	4.4	30	307	1.1	28	234	6.0	30	292	
5,000-----	27	255	6.4	30	334	1.7	27	244	8.4	30	292	
6,000-----	27	268	7.8	30	349	1.8	28	249	10.9	30	289	
8,000-----	28	267	12.2	30	290	2.0	29	248	17.0	29	288	
10,000-----	27	266	15.7	30	293	3.6	28	249	20.7	30	288	
12,000-----	28	270	20.4	30	299	6.1	26	248	25.8	30	286	
14,000-----	27	264	18.0	28	302	7.1	24	254	22.0	27	291	
16,000-----	25	268	11.5	17	273	4.9	23	254	12.9	19	296	
18,000-----	20	265	5.7	11	266	1.6	22	280	5.3	13	299	
20,000-----	18	315	.9			18	289	2.1			16	277
22,000-----	18	289	2.8			13	13	1.7			12	287
24,000-----	16	212	.6								11	270
26,000-----	11	255	3.0									5.4

* October data for the above Air Force stations will be included in the February 1955 issue of this publication.

These free-air resultant winds are based on rawin observations made near 0300 G.C.T.; directions in degrees from north (N = 360°, E = 90°, S = 180°, W = 270°);

Note: Resultants prepared from rawins at high altitudes are biased toward lower wind speeds. Values appearing in this table should therefore be used with caution

speeds in meters per second.

when the number of observations missing is greater than three. See note following Table 22 in the January 1950 issue of the CLIMATOLOGICAL DATA, National Summary.

SOLAR RADIATION DATA

Table 30 Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

JANUARY 1955

Date	Sun's zenith distance								Date	Sun's zenith distance									
	A.M.				P.M.					A.M.				P.M.					
	78.7°	78.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°		0.0°	60.0°	70.7°	75.7°	78.7°					
**ALBUQUERQUE, N. MEX.																			
MADISON, WISCONSIN																			
		Air mass								Air mass									
		5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0
Jan.		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
1-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	1.26	1.14	1.05
2-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	.75	.84	---
3-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	.99	1.09	1.21
4-----	0.85	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5-----	---	---	1.14	---	---	---	1.29	1.16	1.06	0.96	---	---	---	---	---	---	---	---	---
6-----	.92	---	---	---	---	---	1.07	1.01	.96	.88	---	---	---	---	---	---	---	---	---
7-----	0.84	.99	0.88	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
8-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9-----	.88	.94	1.08	1.21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10-----	.89	1.00	1.04	1.26	---	---	1.22	1.14	1.03	.92	---	---	---	---	---	---	---	---	---
11-----	---	1.02	1.15	1.29	---	---	1.30	---	---	---	---	---	---	---	---	---	---	---	---
12-----	---	---	1.10	1.22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
14-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
15-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
16-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
17-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
18-----	1.01	1.10	1.14	1.26	---	1.19	1.02	.91	.85	---	---	---	---	---	---	---	---	---	---
19-----	.94	1.04	1.17	1.30	---	1.29	1.14	1.00	.89	---	---	---	---	---	---	---	---	---	---
20-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
21-----	---	---	---	1.17	---	1.15	1.05	.96	.85	---	---	---	---	---	---	---	---	---	---
22-----	.89	.96	1.05	1.21	---	1.03	1.03	.94	.84	---	---	---	---	---	---	---	---	---	---
23-----	.89	.98	1.08	1.21	---	1.10	1.04	.93	.82	---	---	---	---	---	---	---	---	---	---
24-----	.86	.94	1.07	1.18	---	1.16	1.07	1.00	.86	---	---	---	---	---	---	---	---	---	---
25-----	---	.95	1.06	1.20	---	1.24	1.10	1.00	.89	---	---	---	---	---	---	---	---	---	---
26-----	---	---	---	---	---	1.25	1.03	1.01	.94	---	---	---	---	---	---	---	---	---	---
27-----	.90	1.01	1.11	1.16	---	1.16	1.12	1.04	.97	---	---	---	---	---	---	---	---	---	---
28-----	.84	.97	1.07	1.25	---	1.16	1.12	1.04	.98	---	---	---	---	---	---	---	---	---	---
29-----	.94	1.05	1.15	1.29	---	1.15	1.07	.98	---	---	---	---	---	---	---	---	---	---	---
30-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
31-----	---	---	---	---	---	Cloudy	---	---	---	---	---	---	---	---	---	---	---	---	---
Aver-ages	.91	.99	1.09	1.21	---	1.21	1.07	.99	.89	---	---	---	---	---	---	---	---	---	---

WASHINGTON, D. C. (WBCC)

Air mass

	4.95	3.96	2.97	1.98	*0.96	1.98	2.97	3.96	4.95
Jan.	---	---	---	---	---	---	---	---	0.98
14-----	0.85	0.99	1.11	1.11	---	---	---	---	---
17-----	.74	.87	1.01	1.01	---	---	---	---	.56
20-----	.92	1.05	1.16	1.53	---	1.35	1.01	.89	.76
26-----	.77	1.00	1.18	1.32	---	---	---	---	---
Aver-ages	.82	.98	1.12	1.42	---	1.35	.97	.81	.77

* Extrapolated
** Continual smoke and dust
X Hazy
Smoke

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of Tables 30 and 31 and references to descriptions of instruments, stations, and methods of observation, and to summaries of data, are given in the Monthly Weather Review, vol. 72, No. 1, January 1944, p. 43. A list of pyrheliometric stations is given on page 45 of that issue. An explanation of the formula used in computing the air mass values for each station listed in Table 30 appears in volume 75, No. 3, March 1947, p. 47.

SOLAR RADIATION DATA

JANUARY 1955

Table 31a Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing north at Blue Hill, Mass. during the month

Date-----	1	2	3	4	5	6	7	Avg	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Avg		
Langley-----	37	10	38	39	39	8	36	30	41	40	44	31	45	36	48	41	35	44	39	45	47	49	41	43	
	22	23	24	25	26	27	28	42	29	30	31	1	2	3	4	47	53	54	65	59	89	80	84		

Table 31b Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing east at Blue Hill, Mass. during the month

Date-----	1	2	3	4	5	6	7	Avg	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Avg		
Langley-----	22	23	24	25	26	27	28	50	29	30	31	1	2	3	4	181	96	164	133	204	64	206	240	153	
	50	37	97	133	90	80																			

Table 31c Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing south at Blue Hill, Mass. during the month

Date-----	1	2	3	4	5	6	7	Avg	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Avg			
Langley-----	22	23	24	25	26	27	28	208	29	30	31	1	2	3	4	347	299	470	302	522	83	55	556	584	367	
	132	84	180	78	172	176	137		186	125	228	93	57	250	274											

Table 31d Daily totals and average daily totals by weeks of solar and sky radiation, plus the radiation reflected from the ground, as received on a vertical surface facing west at Blue Hill, Mass. during the month

Date-----	1	2	3	4	5	6	7	Avg	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Avg		
Langley-----	22	23	24	25	26	27	28	132	29	30	31	1	2	3	4	137	93	125	228	93	57	250	274	173	
	132	84	180	78	172	176	137																		

Table 31e Daily totals and average daily totals by weeks of diffuse (sky) radiation as received on a horizontal surface at Blue Hill, Mass. during the month

Date-----	1	2	3	4	5	6	7	Avg	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Avg			
Langley-----	22	23	24	25	26	27	28	71	29	30	31	1	2	3	4	67	51	103	31	75	98	2	3	4	75	
	71	51	71	81	63	73	54																			

Note: Langley is the unit used to denote one gram calorie per square centimeter.

SOLAR RADIATION DATA

Table 33.-Daily totals and average daily totals by weeks of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1955

1955	Aklayuk, Mackenzie	Albuquerque, N. Mex.	Apalachicola, Fla.	Atlanta, Ga.	Barrow, Alaska	Bethel, Alaska	Boise, Idaho	Bismarck, N. Dak.	Boston, Mass.	Brownsville, Tex.	Canton Island, Pacific Area	Caribou, Me.	Charleston, S. C.	Columbia, Mo.	Davis, Calif.	E. Lansing, Mich.	E. Warcham, Mass.	Edmonton, Alberta	El Paso, Tex.	Fairbanks, Alaska	Fort Worth, Tex.	Fresno, Calif.	Gainesville, Fla.	Grand Junction, Colo.	Great Falls, Mont.	Greeley, N. C.	Griffin, Ga.	Hartford, N. C.	Indianapolis, Ind.	Inyokern, Calif.	Ithaca, N. Y.	Lake Charles, La.	Lander, Wyo.	Las Vegas, Nevada	Lineman, Ill.	Lincoln, Nebr.				
Jan. 1--	263	--	81	24	--	8	157	161	43	--	349	660	170	109	212	212	52	197	58	361	3 (401)	47	--	82	125	43	28	65	16	263	194	194	210	123	18	215				
Jan. 2	107	--	143	298	--	15	154	14	189	--	184	477	50	316	225	231	191	22	121	121	147	181	--	52	101	259	322	243	188	322	54	126	178	72	138	187	187			
Jan. 3	141	--	165	292	--	50	93	182	213	--	385	617	89	329	33	215	40	203	73	152	4	122	107	--	234	185	234	335	331	77	271	114	169	219	221	36	78			
Jan. 4	211	--	25	242	--	42	170	108	164	--	276	99	304	17	81	68	85	109	231	77	190	211	--	157	187	203	298	224	23	233	20	219	51	299	36	170				
Jan. 5	(337)	--	82	272	--	46	176	190	120	--	344	206	310	18	226	19	175	95	380	5	297	82	--	241	187	58	323	264	35	216	162	192	264	258	19	19				
Jan. 6	350	--	70	141	--	33	160	15	116	--	150	496	94	331	240	237	105	22	61	378	2	423	98	--	275	185	178	112	287	105	67	10	356	310	231	229	222			
Jan. 7	334	--	136	327	--	15	171	86	87	--	88	538	58	348	260	235	111	112	103	265	7 (102)	110	--	202	161	282	359	327	224	--	128	238	322	105	229	194				
Averages----	(249)	--	100	228	--	30	153	108	133	--	254	558	109	292	143	205	84	117	89	270	4 (240)	120	--	177	(162)	180	254	249	95	229	97	213	222	193	101	136				
Departures----	--	--	--	--	--	--	--	-17	--	--	--	--	--	--	--	40	4	0	--	--	-3	--	--	-39	--	--	--	--	--	--	-1	--	--	--	-34					
Jan. 8	241	--	26	227	--	12	78	201	124	--	275	549	93	309	143	225	169	233	85	185	7 (75)	132	--	294	99	239	277	341	192	339	118	193	276	311	216	231				
Jan. 9	333	--	162	94	--	32	79	192	158	--	234	292	61	261	108	23	12	219	139	263	8	108	179	--	325	111	142	125	103	94	41	34	162	317	39	185				
Jan. 10	372	--	134	34	--	20	128	203	131	--	346	350	78	71	48	94	50	221	143	(382)	12 (204)	140	--	161	126	64	32	207	34	139	100	198	276	53	173	196				
Jan. 11	T 256	--	86	141	--	18	69	70	184	--	269	412	88	132	177	218	181	74	107	304	5	320	209	--	202	191	96	247	73	222	351	208	328	150	325	148	33			
Jan. 12	T (352)	--	63	272	--	25	175	141	206	--	120	359	200	294	83	98	61	127	76	323	12 (293)	180	--	302	137	139	284	242	24	349	126	82	233	338	50	176				
Jan. 13	T 326	--	94	334	--	21	147	74	128	--	49	579	177	347	272	40	213	55	61	224	8 (369)	132	--	209	114	273	371	--	133	309	132	393	251	327	142	227				
Jan. 14	T 125	--	96	348	--	21	77	214	203	--	265	648	129	343	136	169	123	235	85	161	8	58	34	--	275	208	221	282	327	102	--	153	324	238	344	80	175			
Averages----	(286)	--	95	207	--	21	108	156	162	--	222	455	118	251	138	124	114	165	100	(263)	9 (204)	144	--	253	141	168	245	216	114	297	125	222	226	288	121	176				
Departures----	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	52	18	19	--	--	-1	--	--	-24	--	--	--	--	--	--	--	--	--	--	-1					
Jan. 15	T 191	312	21	71	--	32	197	74	66	--	148	465	177	128	284	16	49	89	67	294	17	179	60	--	278	92	148	41	119	262	327	70	34	230	294	262	236			
Jan. 16	252	84	28	122	--	27	--	210	170	--	438	595	92	27	85	210	232	68	119	100	--	113	129	163	78	(131)	222	210	155	113	135	397	190	287	350	197	31			
Jan. 17	2	163	110	19	346	--	24	183	199	187	--	355	138	87	339	99	49	233	219	31	--	13	92	167	--	287	199	297	387	363	96	338	176	148	191	350	197	31		
Jan. 18	T 366	19	66	99	--	23	164	216	79	--	427	256	133	193	43	95	41	(232)	55	409	13	102	41	--	215	161	265	72	353	177	76	118	112	262	152	101	168			
Jan. 19	T 376	298	139	136	--	37	(159)	172	139	199	--	450	402	82	--	248	113	80	188	116	332	6 (122)	246	136	161	196	132	51	93	371	121	154	238	353	74	246				
Jan. 20	6 284	399	62	354	--	43	132	217	119	273	--	413	118	--	115	199	236	190	168	352	12	65	273	352	241	89	334	389	378	255	371	227	246	245	321	265	66			
Jan. 21	6 383	75	34	121	--	27	125	233	172	234	--	419	596	230	--	224	205	419	243	120	419	11	380	244	180	305	145	205	138	344	283	372	179	255	288	369	33	232		
Averages----	2	288	185	53	178	--	30	(160)	189	133	--	359	401	131	172	157	127	124	(199)	89	361	13	(148)	172	--	229	145	220	180	(248)	198	295	151	152	227	305	155	155		
Departures----	--	--	--	--	--	--	--	31	--	--	--	--	--	--	--	65	15	50	--	--	-1	--	--	-25	--	--	--	--	--	--	--	--	--	--	34					
Jan. 22	3	390	(350)	59	246	*	44	131	135	147	--	(128)	644	128	203	231	245	137	50	56	420	38	228	294	44	308	157	280	298	129	131	353	174	249	272	352	222	264		
Jan. 23	386	35	76	38	--	40	84	76	151	--	68	641	198	52	283	257	208	40	112	417	20	384	306	16	291	129	68	33	60	234	--	254	158	245	287	263				
Jan. 24	13	389	54	43	185	1	54	114	181	157	--	(463)	61	80	145	186	195	143	409	16	390	187	6	321	101	185	202	55	170	--	249	410	261	274	173	197				
Jan. 25	3	348	424	129	229	1	42	188	163	248	--	145	461	619	189	399	321	250	111	217	71	373	20	389	97	394	221	73	238	441	375	186	216	254	185	264				
Jan. 26	7	391	417	197	634	1	59	272	184	275	--	202	394	635	189	390	264	93	110	197	87	302	22	238	159	412	329	170	273	423	397	147	401	240	384	265	375	185	246	
Jan. 27	8	(393)	426	215	107	2	47	126	179	275	--	182	423	680	81	170	161	239	287	220	190	421	29	(402)	109	313	348	74	163	184	260	318	390	256	106	208	373	324	121	
Jan. 28	4	408	381	138	305	6	66	157	243	208	--	243	672	248	325	313	70	204	267	66	439	--	381	74	338	355	217	266	419	348	133	412	205	391	270	384	329	289		
Averages----	6	(387)	(298)	122	263	2	51	155	166	209	193	(314)	648	172	229	236	186	178	169	103	397	24	(344)	175	208	310	132	209	286	232	188	375	216	303	249	338	244	227		
Departures----	--	--	--	--	--	--	3	--	67	--	--	--	--	--	--	--	24	64	32	--	--	-1	--	-36	--	--	--	--	--	--	--	--	--	84						
Jan. 29	12	415	438	138	220	10	27	121	236	145	230	468	733	236	381	102	41	242	269	67	447	46	(404)	130	355	341	74	327	468	165	208	314	241	451	206	356	315	315	222	264
Jan. 30	21	325	435	110	219	4	65	258	194	122	208	346	866	237	396	60	303	209	165	410	31	391	83	403	226	130	310	466	351	314	365	153	317	345	258					
Jan. 31	18	(274)	434	98	132	14	--	137	234	159	253	356	680	252	348	299	136	92	282	78	366	43	253	187	300	85	128	289	410	275	254	240								
Feb. 1	17	412	273	150	60	13	52	65	103	239	93	362	698	280	(279)	20	240	131	88	38	443	--	391	342	330	157	114	295	116	364	29	418	154	263	116	375	50	189		
Feb. 2	16	421	414	119	198	19	43	194	93	299	109	288	688	273	273	71	315	264	82	184	403	50	336	355																

Accumulated Departures January 1 to February 4, 1955

Note.—Calories is the unit used to denote one gram calorie per square centimeter.

-Langley is the unit used to denote one
Value in parentheses are interpolated.

* gun below horizon prior to 24th.

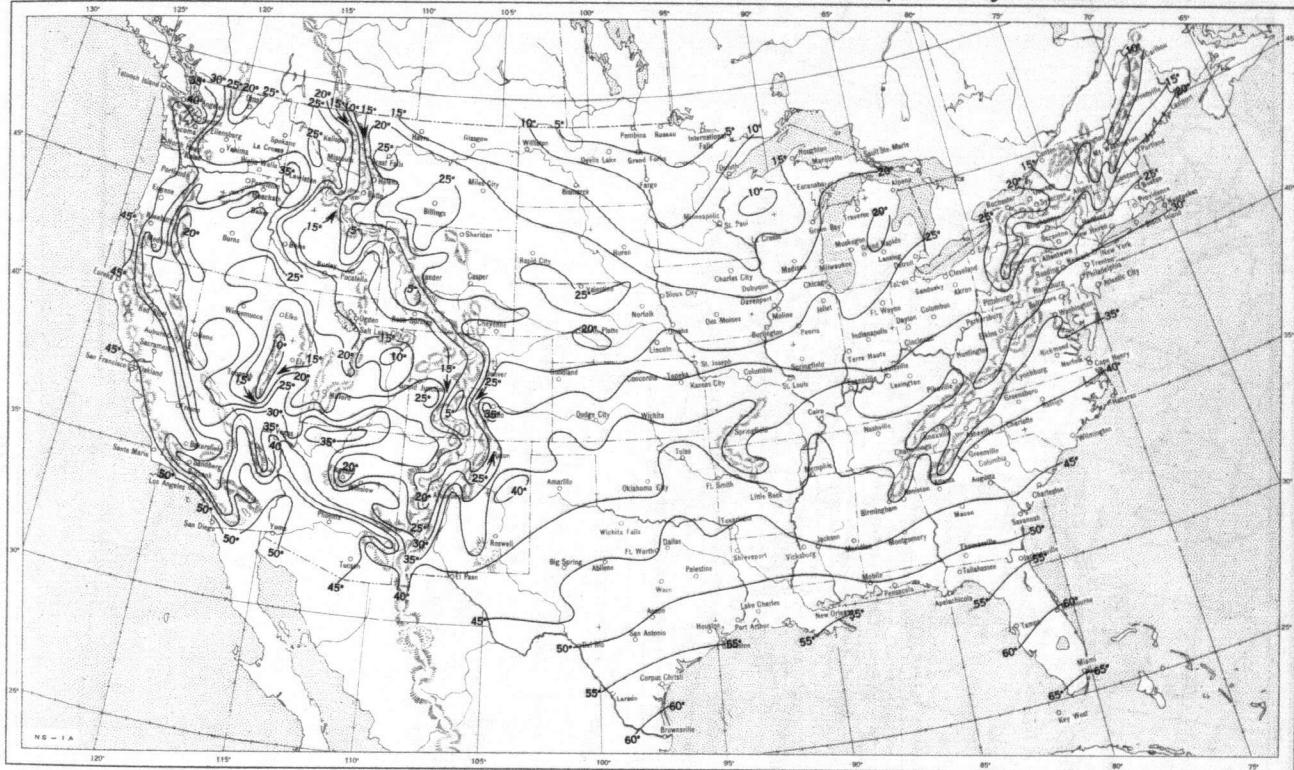
SOLAR RADIATION DATA

Table 33.—Daily totals and average daily totals by weeks of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.—Continued

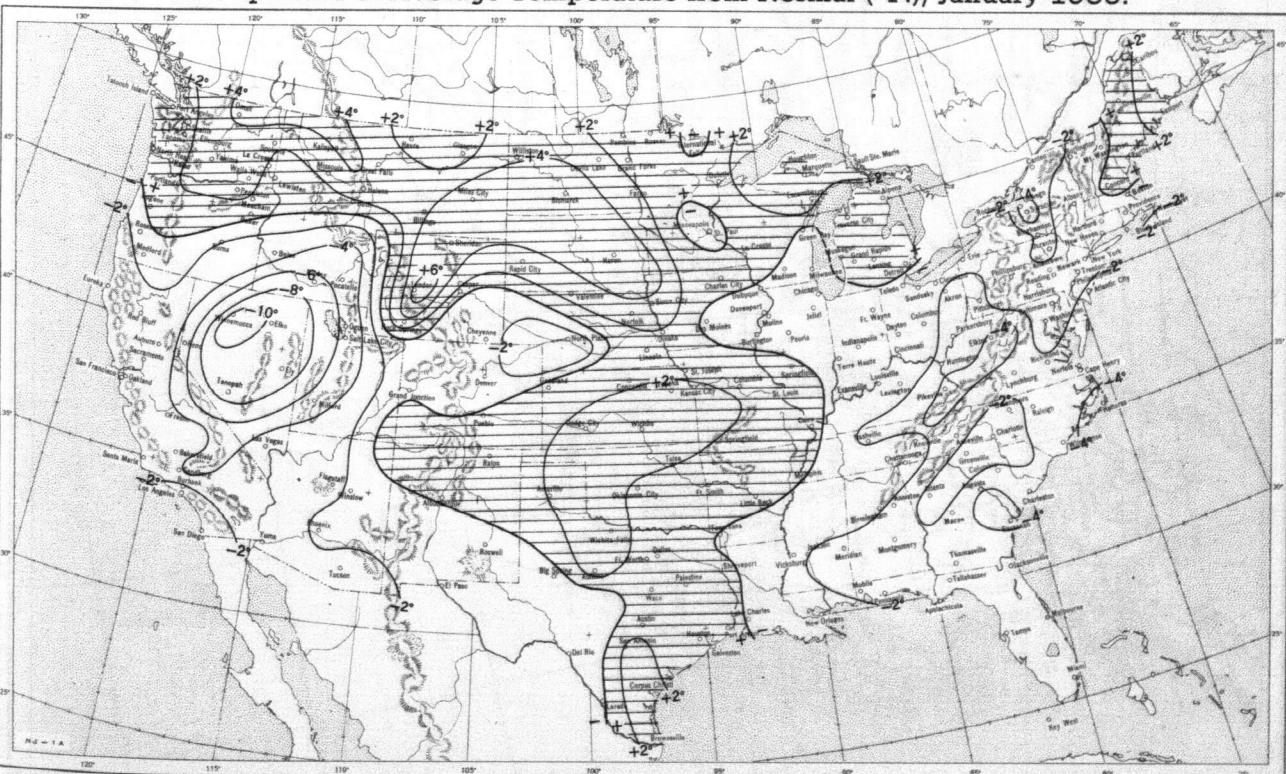
JANUARY 1955

		Little Rock, Ark.	Los Angeles, Calif. (WBAS)	Los Angeles, Calif. (WBGS)	Madison, Wis.	Matanuska, Alaska	Medford, Ore.	Miami, Fla.	Midland, Tex.	Nashville, Tenn.	Newport, R. I.	New York, N. Y.	Oak Ridge, Tenn.	Oklahoma City, Okla.	Ottawa, Ontario	Phoenix, Ariz.	Portland, Me.	Prosser, N. W., Wash.	Rapid City, S. Dak.	Richland, Wash.	Riverside, Calif.	St. Cloud, Minn.	San Antonio, Tex.	Santa Maria, Calif.	S. Ste. Marie, Mich.	Schenectady, N. Y.	Sayville, N. Y.	Seattle, Wash. (U. of W.)	Seattle, Wash. (WBAS)	State College, Pa.	Stillwater, Okla.	Spokane, Wash.	Tampa, Fla.	Toronto, Ontario	Upstate, N. Y.	Winnipeg, Manitoba				
1955																																								
Jan.	1----	221	30	31	76	4	80	281	324	57	211	178	31	349	(98)	312	108	127	201	139	92	154	—	67	49	232	185	38	51	50	263	148	483	353	129	226	432	108		
Jan.	2----	257	278	258	112	12	193	268	109	270	35	90	268	195	40	106	17	73	195	79	261	73	—	299	32	61	30	67	68	117	206	130	412	346	115	58	373	69		
Jan.	3----	68	176	176	58	13	210	372	80	231	220	210	230	136	(143)	91	180	153	140	188	153	—	259	35	233	179	87	135	147	43	147	431	347	53	225	435	163			
Jan.	4----	154	266	248	47	9	37	398	119	71	147	182	91	144	(200)	275	117	58	55	65	206	149	—	292	173	151	149	23	33	127	30	186	483	386	183	178	461	146		
Jan.	5----	99	165	172	32	12	122	378	340	150	227	206	154	258	84	327	204	79	147	70	215	144	—	228	39	157	11	45	56	140	215	125	440	322	107	32	418	137		
Jan.	6----	114	69	78	184	16	192	406	344	93	10	31	153	163	(92)	310	30	44	187	56	37	222	—	140	151	18	21	28	41	37	293	115	440	322	107	32	418	137		
Jan.	7----	256	263	248	181	8	136	339	234	276	165	246	318	34	212	94	92	42	213	37	270	194	—	312	120	260	183	42	59	216	86	145	430	343	150	243	413	137		
Averages----	167	181	173	96	11	140	349	221	184	144	163	178	183	(124)	217	107	83	162	84	181	156	—	228	86	170	129	42	62	107	152	142	450	350	112	170	431	135			
Departures----	—	—	—	-31	—	—	—	—	—	40	16	47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Jan.	8----	146	297	284	132	6	87	372	10	116	224	232	120	21	(204)	254	208	51	151	51	325	110	—	332	71	258	173	11	15	149	86	127	490	383	45	242	489	81		
Jan.	9----	148	266	247	93	4	79	—	59	91	224	87	49	192	(163)	334	217	46	146	64	304	113	—	172	67	142	100	76	141	26	228	146	483	281	19	147	236	75		
Jan.	10----	86	190	193	192	9	59	417	355	42	237	228	228	46	355	209	—	—	174	115	110	141	84	—	287	115	232	196	26	63	263	146	402	385	108	227	383	187		
Jan.	11----	165	322	304	128	20	108	374	302	70	87	169	69	138	238	178	130	103	95	63	327	56	—	328	98	140	201	13	29	217	46	161	365	415	146	163	359	94		
Jan.	12----	237	325	308	(54)	18	143	382	269	175	171	124	221	347	120	361	169	100	230	55	257	164	—	336	82	189	108	39	67	65	281	144	424	330	88	193	437	173		
Jan.	13----	288	332	308	(123)	29	142	418	178	273	53	48	292	331	(174)	189	191	138	203	132	308	218	—	216	84	127	126	346	422	111	271	236	346	111	322	91				
Jan.	14----	68	292	289	99	37	150	432	92	241	261	276	247	124	112	223	156	219	146	308	134	—	327	69	283	203	56	71	152	78	148	472	427	178	260	391	77			
Averages----	163	292	276	(117)	17	110	398	181	144	180	166	149	216	(190)	238	189	110	166	89	281	126	—	297	103	190	158	36	57	113	179	158	426	379	111	186	371	108			
Departures----	—	—	—	-18	—	—	—	—	—	7	27	37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Jan.	15----	204	145	178	168	31	86	419	70	149	74	71	61	219	(80)	157	150	103	207	70	103	220	(88)	(167)	64	58	54	44	50	81	263	148	463	386	56	68	439	138		
Jan.	16----	285	222	141	160	37	116	414	351	267	256	246	104	(208)	112	220	110	151	64	97	250	(432)	229	173	267	144	38	34	212	68	173	483	321	153	249	461	192			
Jan.	17----	305	298	299	214	52	97	311	272	309	241	231	333	116	(207)	380	171	124	123	105	326	213	—	229	181	254	171	37	52	160	22	173	438	372	217	234	330	193		
Jan.	18----	31	53	29	127	22	197	397	442	88	260	276	156	125	(202)	363	214	109	259	104	24	153	—	202	199	285	190	140	—	94	85	171	487	317	152	251	349	104		
Jan.	19----	189	329	264	220	11	148	448	288	146	201	218	82	142	228	159	235	232	209	189	203	242	411	312	202	215	172	92	116	192	97	200	—	193	206	207	299	159		
Jan.	20----	74	316	317	168	47	106	394	348	219	242	282	259	79	246	382	198	175	235	194	285	174	348	211	(279)	216	72	66	248	20	194	469	418	243	272	57				
Jan.	21----	277	327	305	77	14	63	197	313	22	261	243	60	346	(134)	383	249	192	197	170	349	219	424	350	45	291	148	94	108	133	310	191	462	281	113	254	409			
Averages----	195	242	222	162	31	116	369	298	171	219	226	171	161	(186)	280	202	149	199	128	198	193	(299)	(263)	154	(236)	156	74	71	160	123	179	467	327	163	231	363	153			
Departures----	—	—	—	10	—	—	—	—	19	59	96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Jan.	22----	274	344	332	202	35	83	277	250	334	99	178	197	394	71	408	96	69	234	62	373	188	156	346	—	153	107	12	48	179	331	138	465	386	56	68	439	138		
Jan.	23----	296	326	318	231	47	217	398	316	116	126	191	91	394	193	399	94	80	150	71	362	222	317	(355)	—	177	156	51	40	75	344	162	469	178	134	177	381	131		
Jan.	24----	258	309	312	183	28	119	198	321	297	216	215	278	263	206	402	218	46	258	52	348	233	428	306	—	237	192	23	35	190	208	112	453	57	175	242	97			
Jan.	25----	285	295	241	158	30	190	476	302	347	178	121	353	396	124	291	155	100	183	125	208	250	419	346	101	199	182	74	326	182	75	74	326	182	110	463	69	—	422	98
Jan.	26----	144	330	319	199	34	277	470	173	307	235	278	359	280	239	390	181	61	26	31	204	297	386	155	287	172	149	168	219	293	234	415	449	183	286	460	216			
Jan.	27----	309	353	375	228	34	278	241	348	312	253	309	221	394	213	413	213	55	196	41	399	176	363	388	229	291	178	104	66	267	316	148	442	352	271	396	139			
Jan.	28----	277	366	364	253	74	230	478	329	147	285	161	185	420	—	427	276	37	273	41	408	287	388	387	240	296	187	38	57	124	360	144	366	389	147	291	516	213		
Averages----	265	319	323	208	40	199	363	291	266	199	208	240	364	177	46	188	60	329	231	338	(356)	181	234	168	66	69	164	311	160	388	300	186	(235)	444	149					
Departures----	—	—	—	-31	—	—	—	—	97	42	55	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Jan.	29----	303	324	329	253	63	204	83	389	271	262	252	346	391	—	431	257	110	135	81	374	262	432	24																

Chart I. A. Average Temperature ($^{\circ}$ F.) at Surface, January 1955.



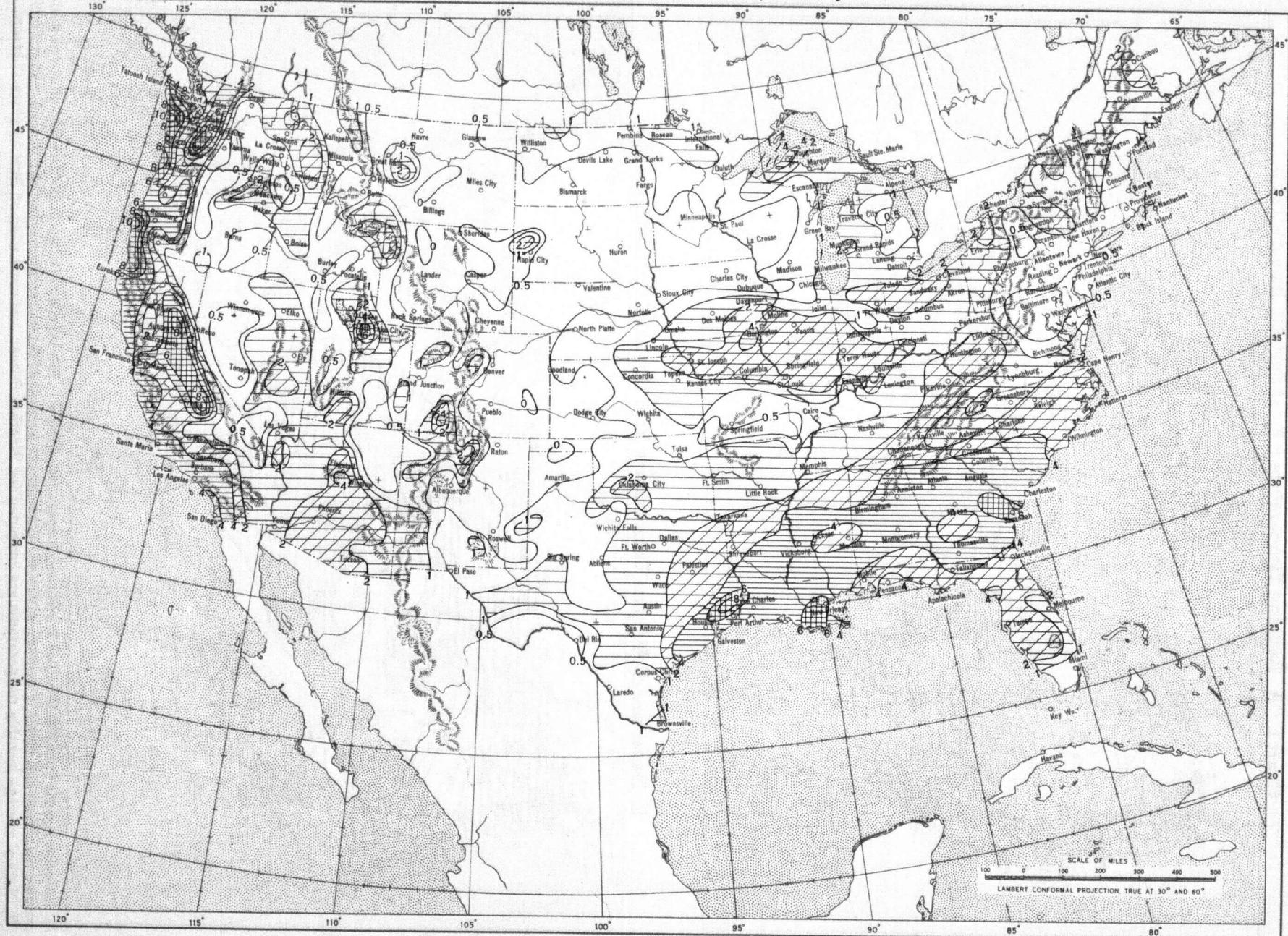
B. Departure of Average Temperature from Normal ($^{\circ}$ F.), January 1955.



A. Based on reports from 800 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

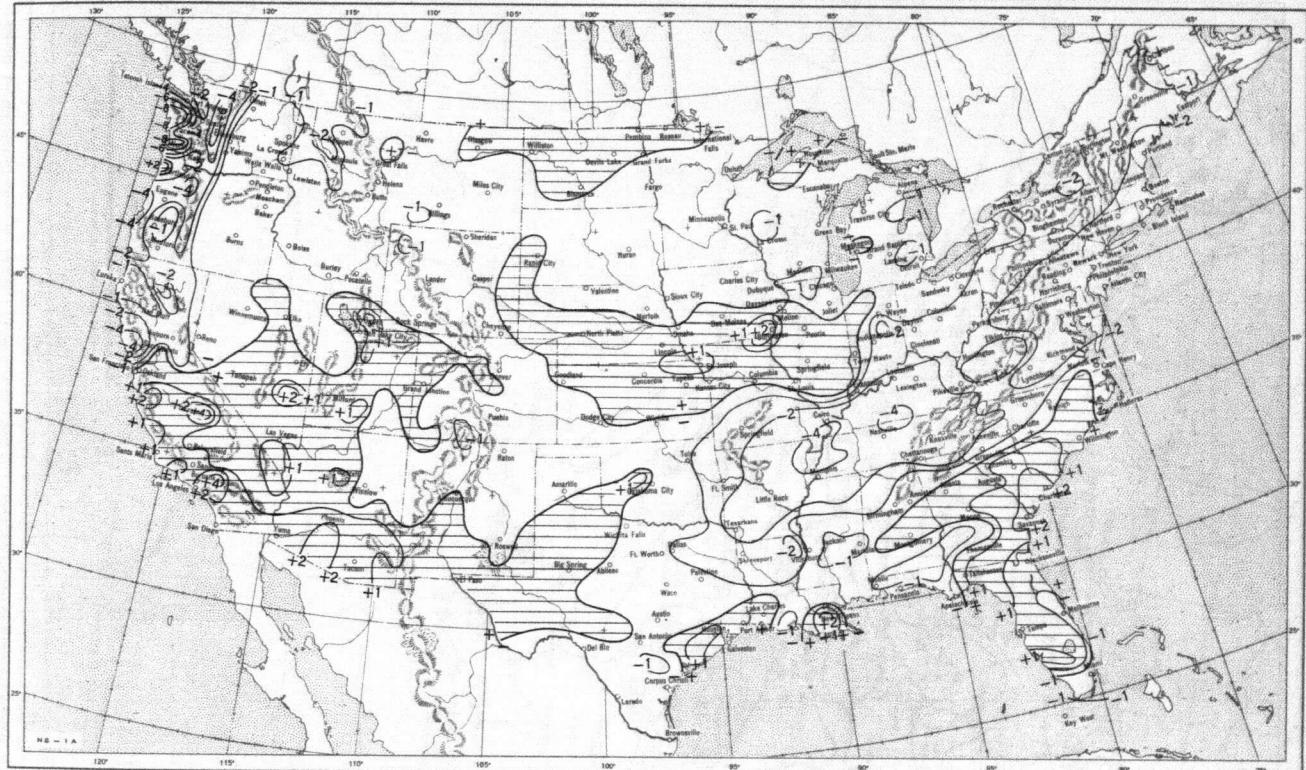
B. Normal average monthly temperatures are computed for Weather Bureau stations having at least 10 years of record.

Chart II. Total Precipitation (Inches), January 1955.

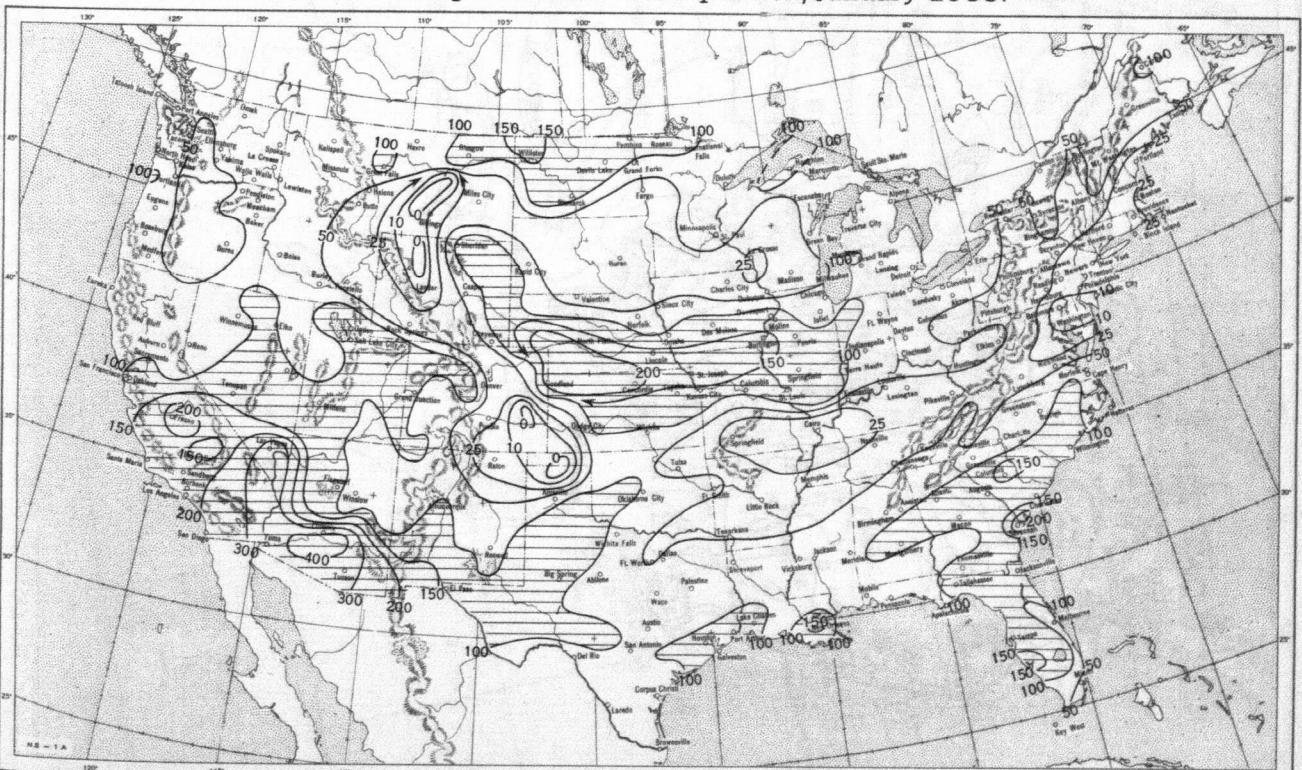


Based on daily precipitation records at 800 Weather Bureau and cooperative stations.

Chart III. A. Departure of Precipitation from Normal (Inches), January 1955.



B. Percentage of Normal Precipitation, January 1955.



Normal monthly precipitation amounts are computed for stations having at least 10 years of record.

Chart IV. Total Snowfall (Inches), January 1955.

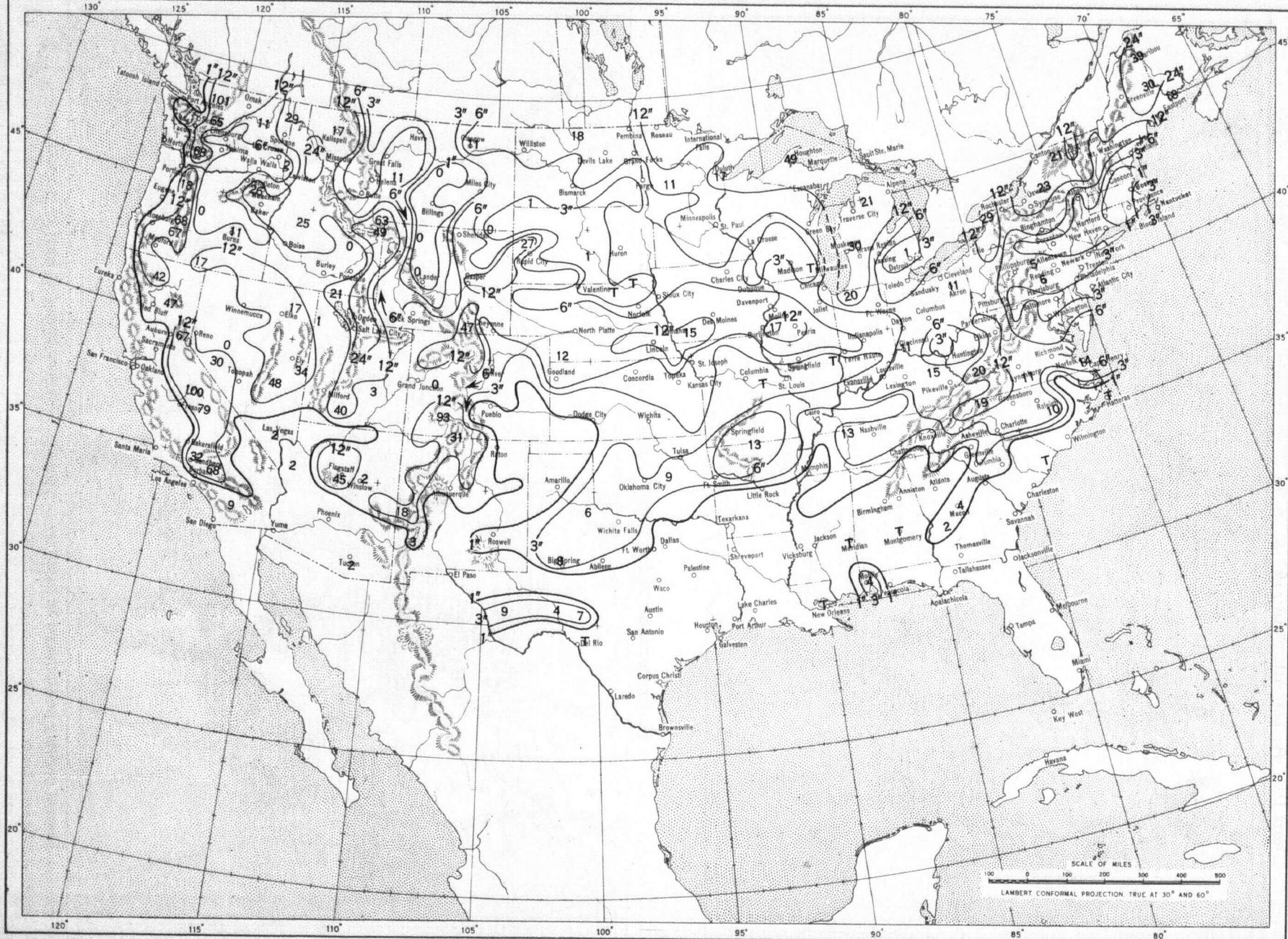
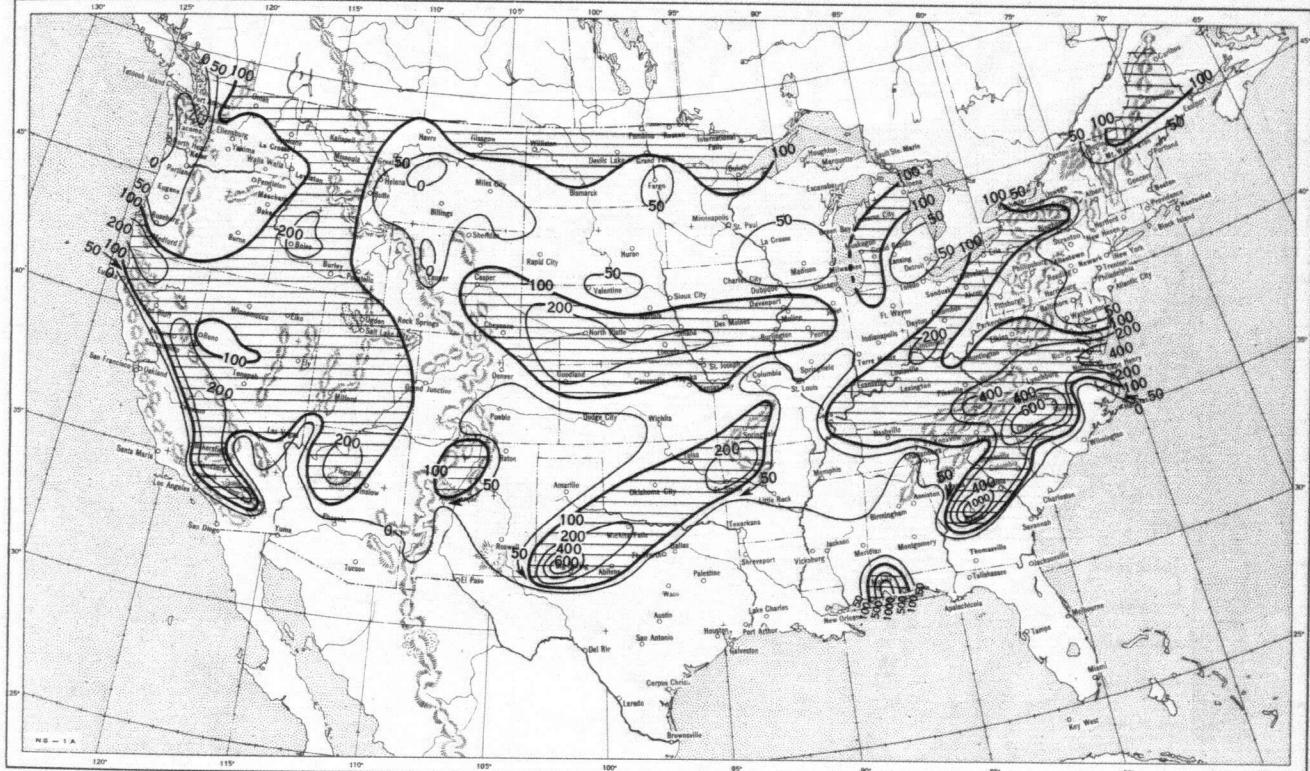
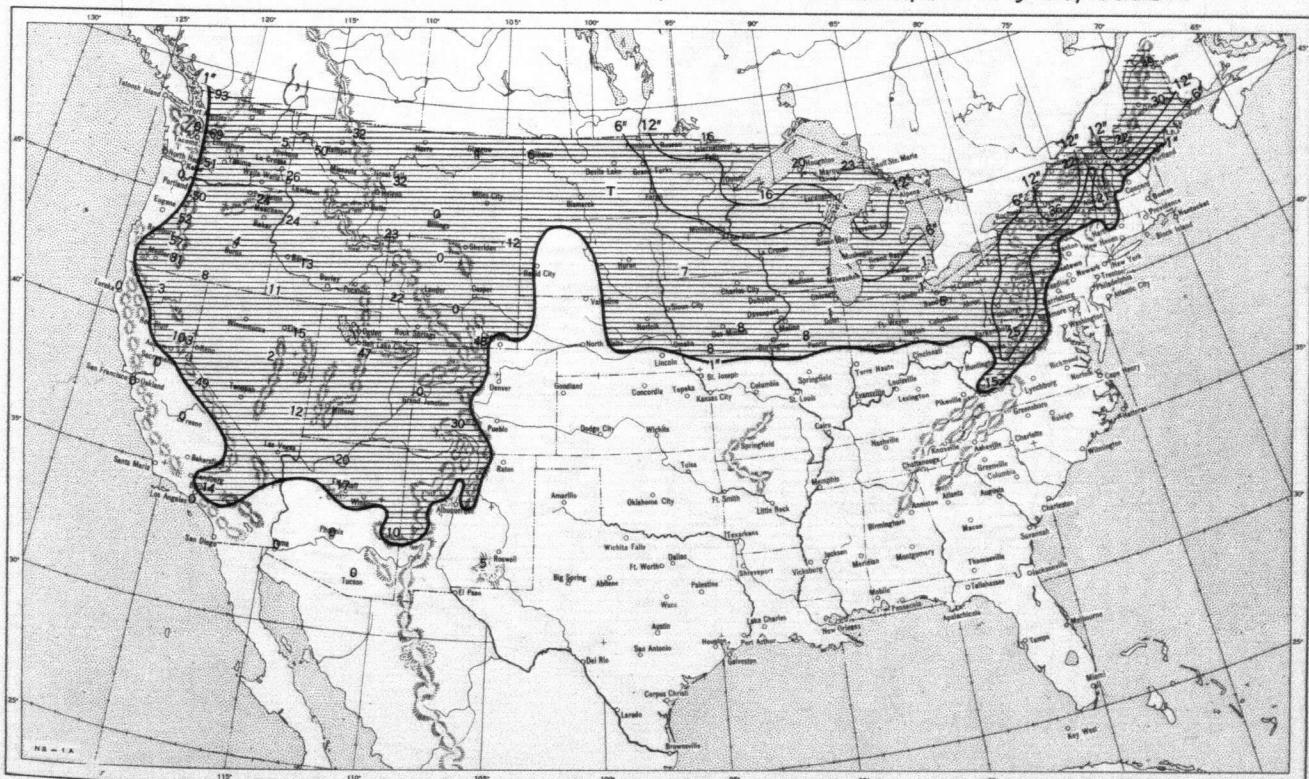


Chart V. A. Percentage of Normal Snowfall, January 1955.

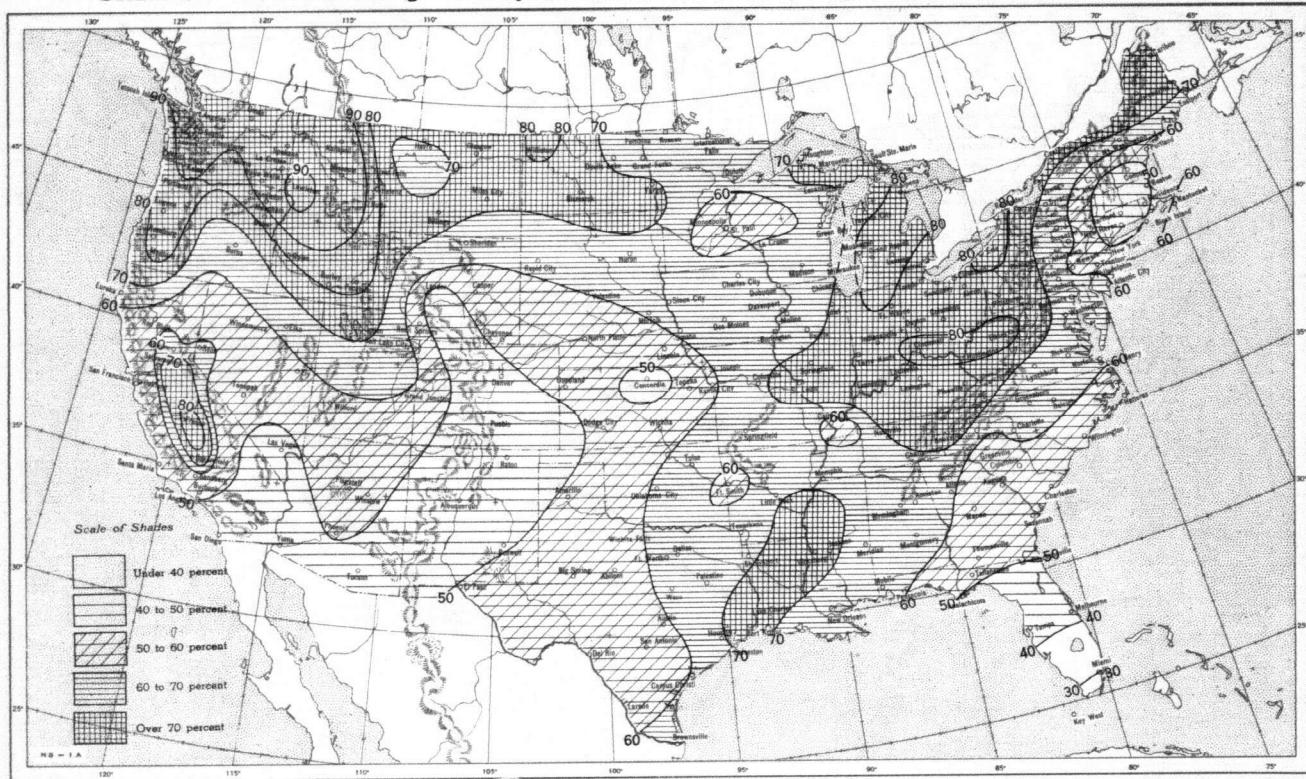


B. Depth of Snow on Ground (Inches). 7:30 a. m. E. S. T., January 31, 1955.

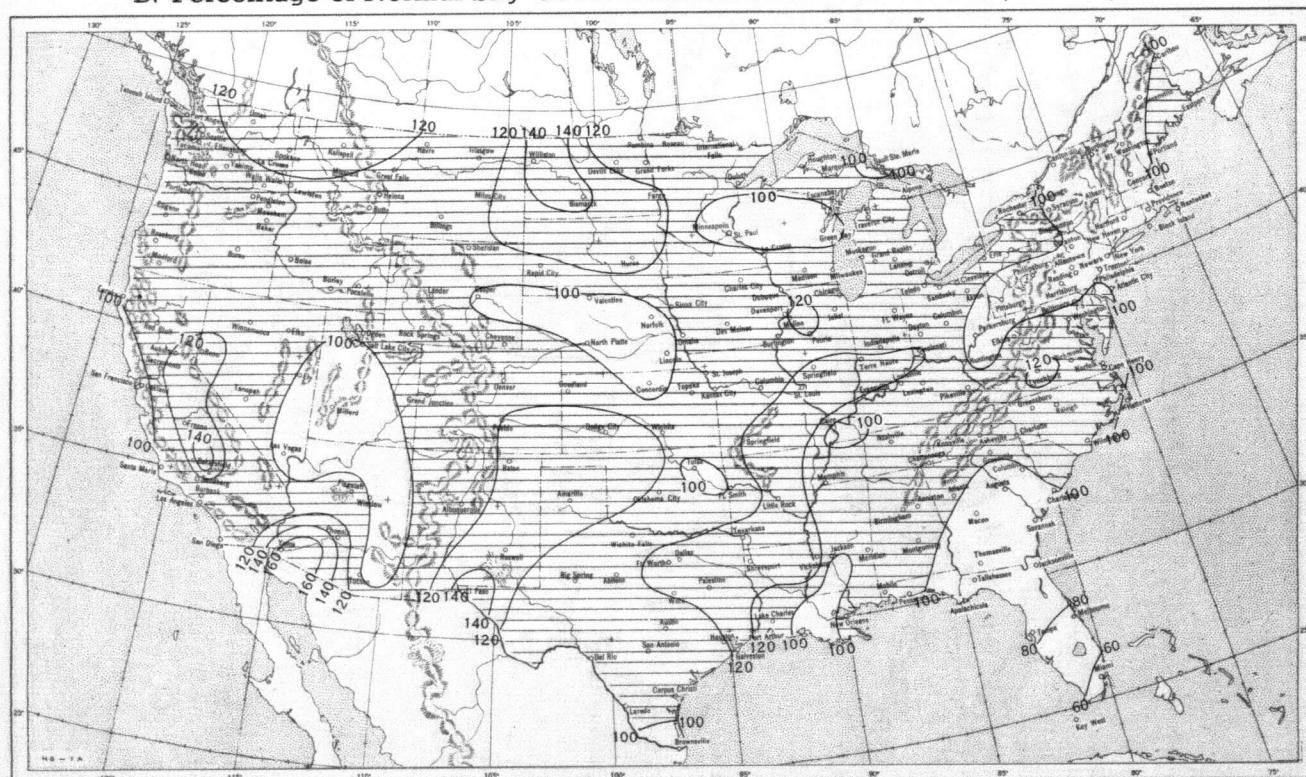


A. Amount of normal monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
 B. Shows depth currently on ground at 7:30 a. m. E.S.T., of the Tuesday nearest the end of the month. It is based on reports from Weather Bureau and cooperative stations. Dashed line shows greatest southern extent of snowcover during month.

Chart VI. A. Percentage of Sky Cover Between Sunrise and Sunset, January 1955.

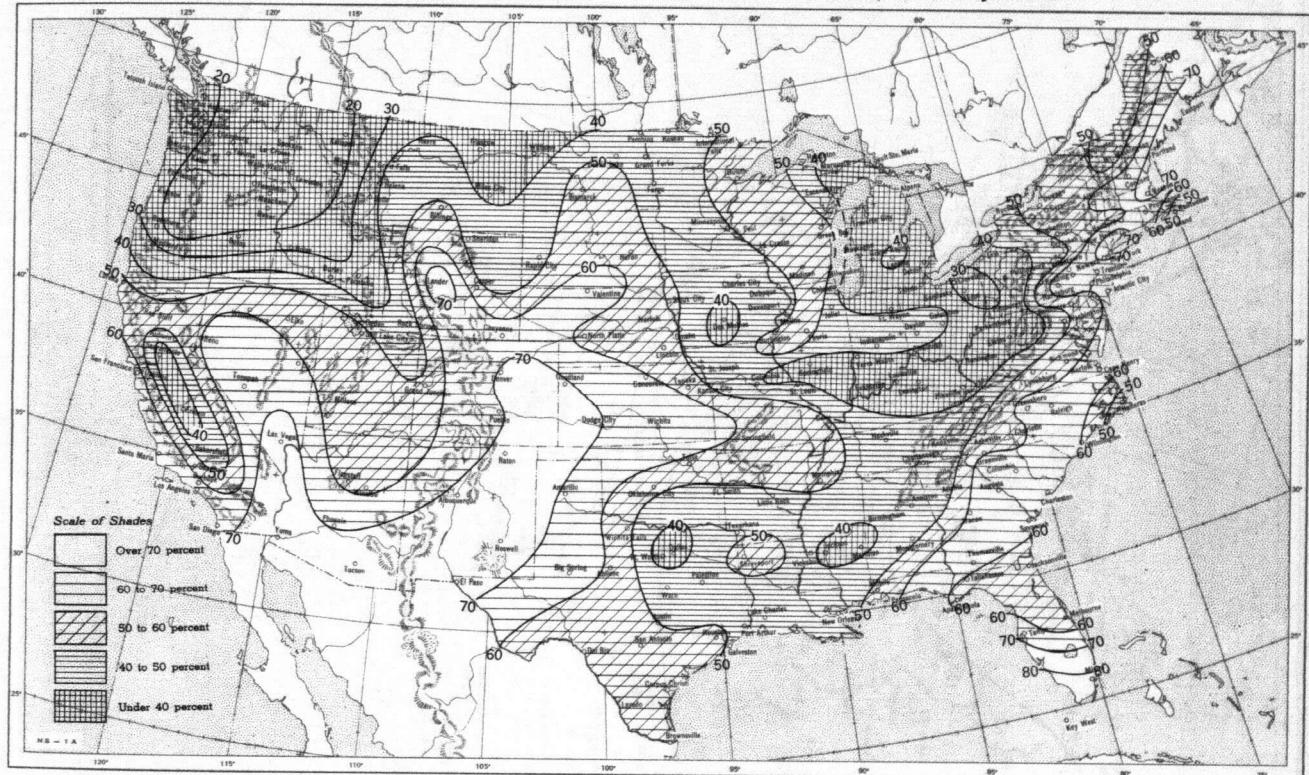


B. Percentage of Normal Sky Cover Between Sunrise and Sunset, January 1955.

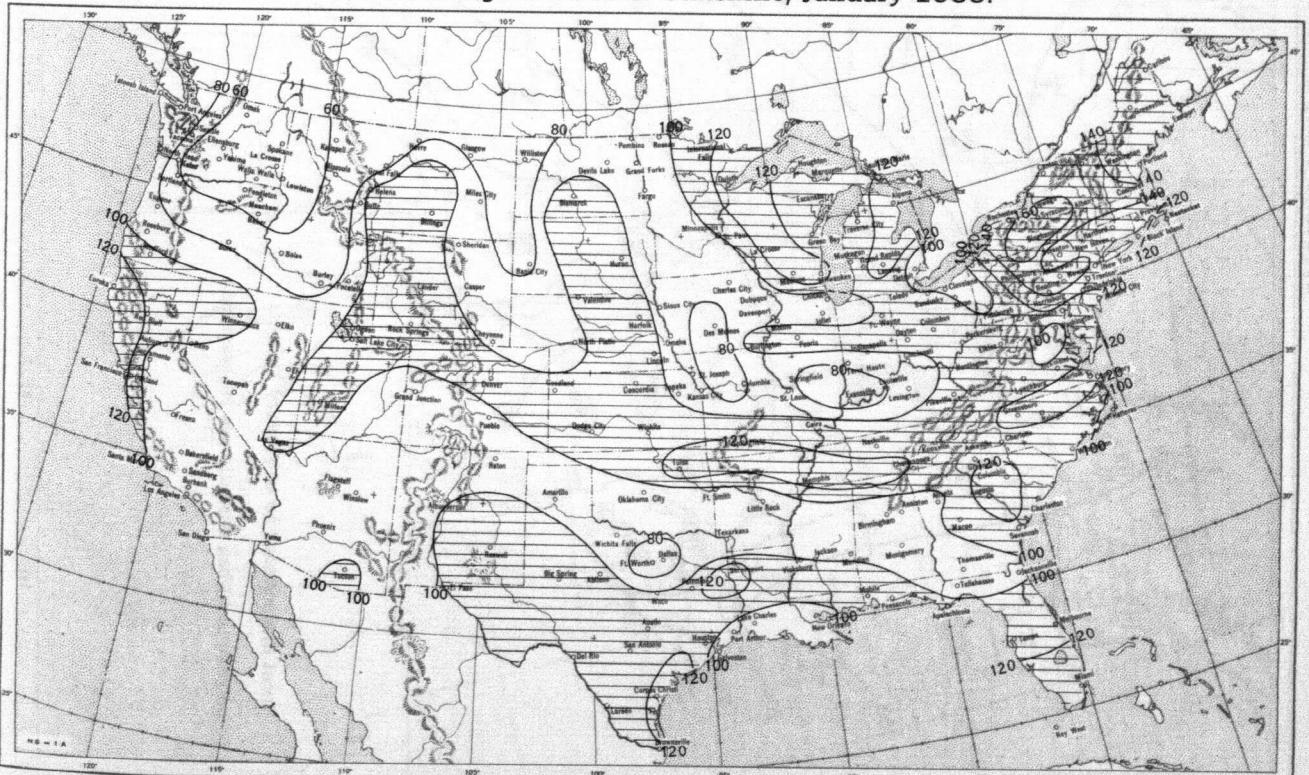


A. In addition to cloudiness, sky cover includes obscuration of the sky by fog, smoke, snow, etc. Chart based on visual observations made hourly at Weather Bureau stations and averaged over the month. B. Computations of normal amount of sky cover are made for stations having at least 10 years of record.

Chart VII. A. Percentage of Possible Sunshine, January 1955



B. Percentage of Normal Sunshine, January 1955.



A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Normals are computed for stations having at least 10 years of record.

Chart VIII. Average Daily Values of Solar Radiation, Direct + Diffuse, January 1955. Inset: Percentage of Normal Average Daily Solar Radiation, January 1955.

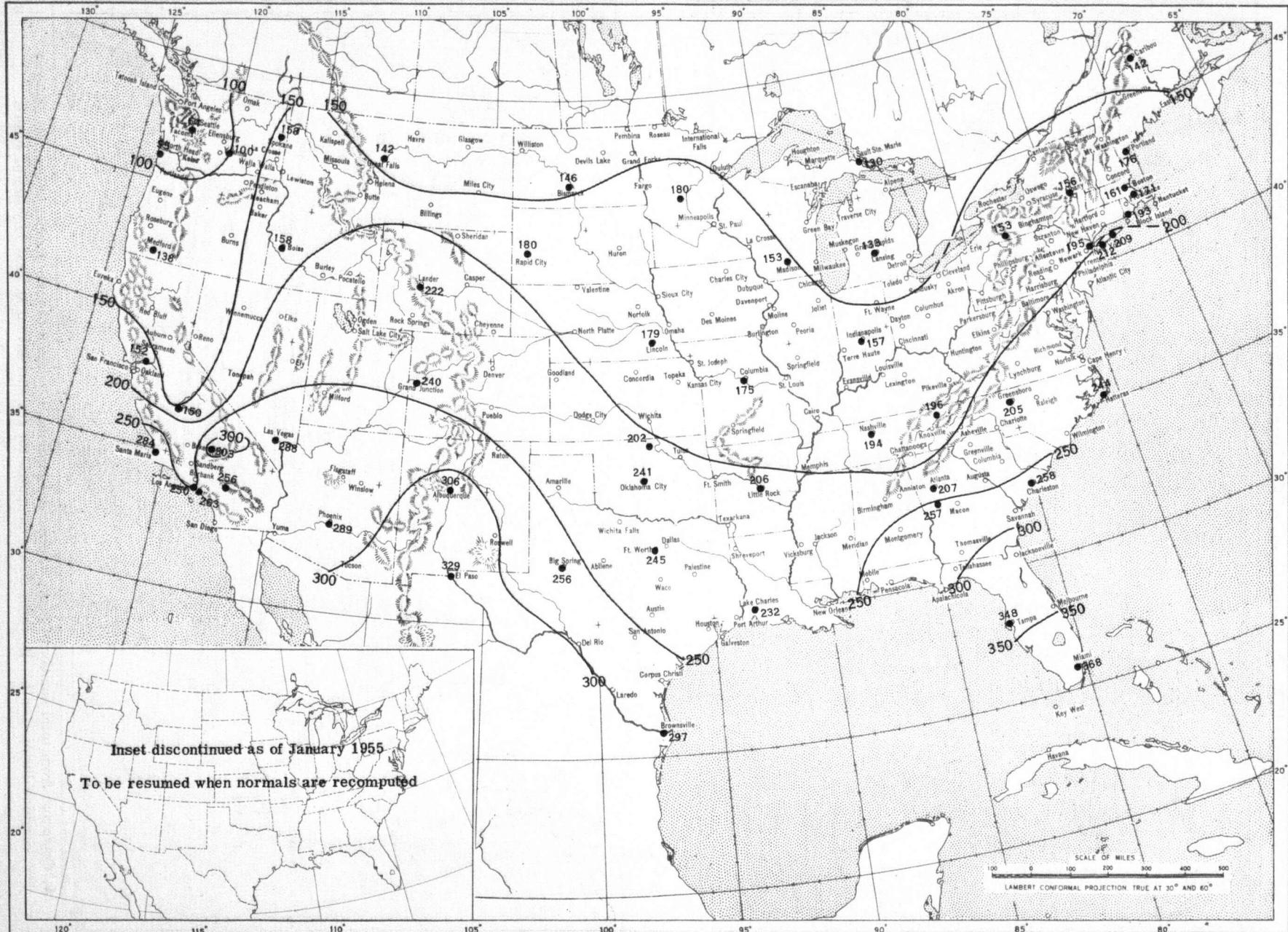
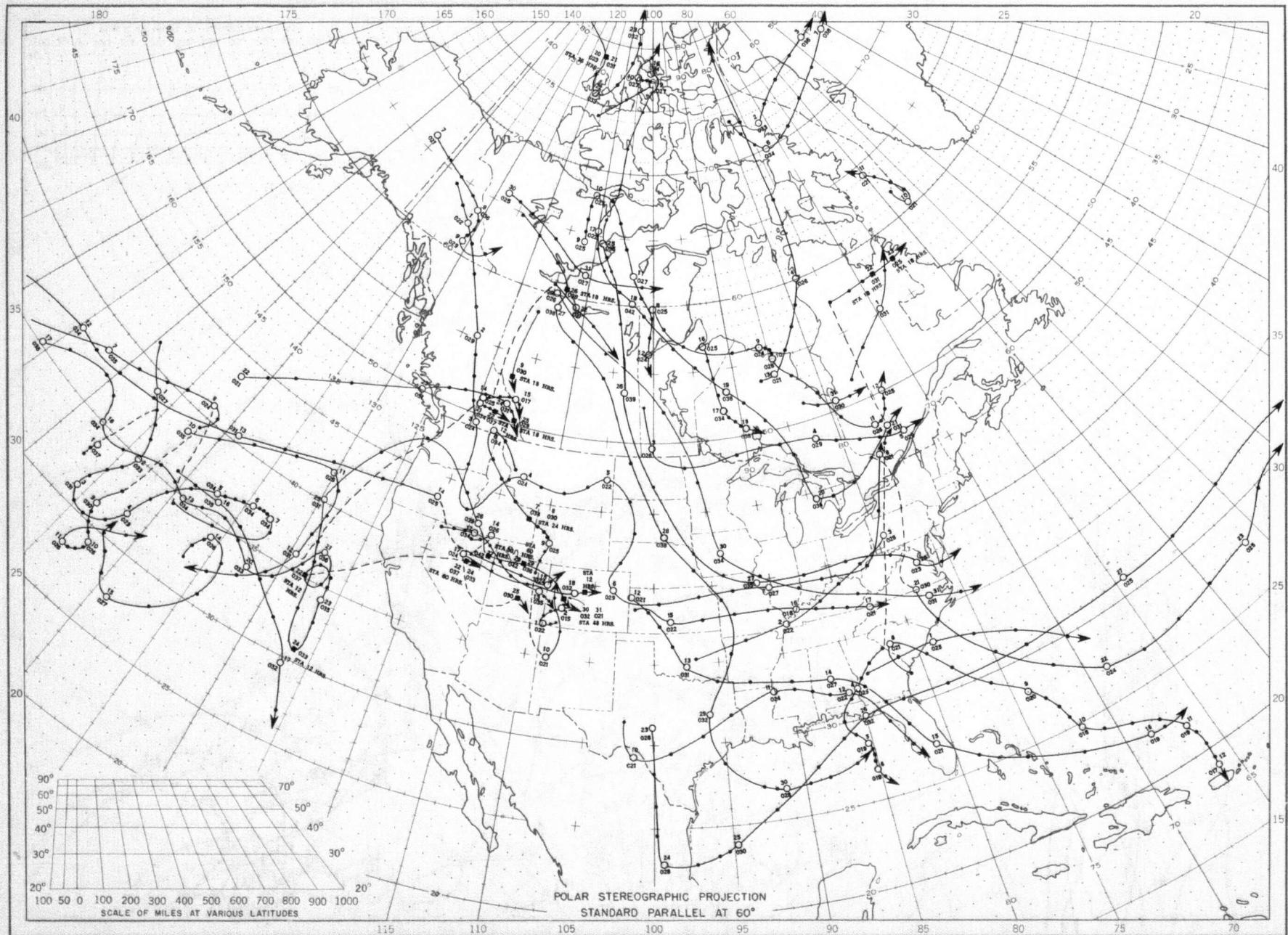


Chart shows mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleyes (1 langley = 1 gm. cal. cm.⁻²). Basic data for isolines are shown on chart. Further estimates are obtained from supplementary data for which limits of accuracy are wider than for those data shown. Normals are computed for stations having at least 9 years of record.

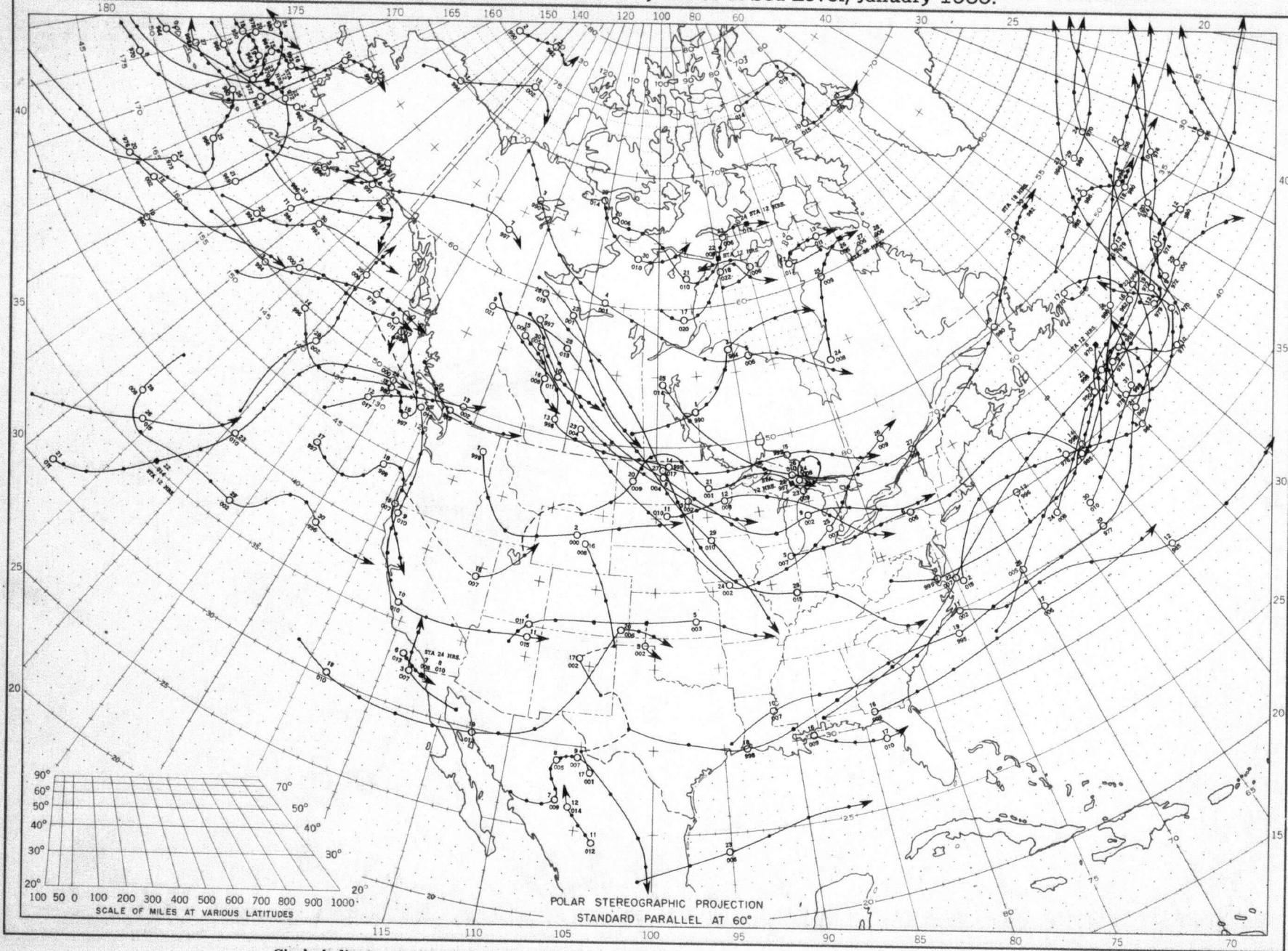
Chart IX. Tracks of Centers of Anticyclones at Sea Level, January 1955.



Circle indicates position of center at 7:30 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar.

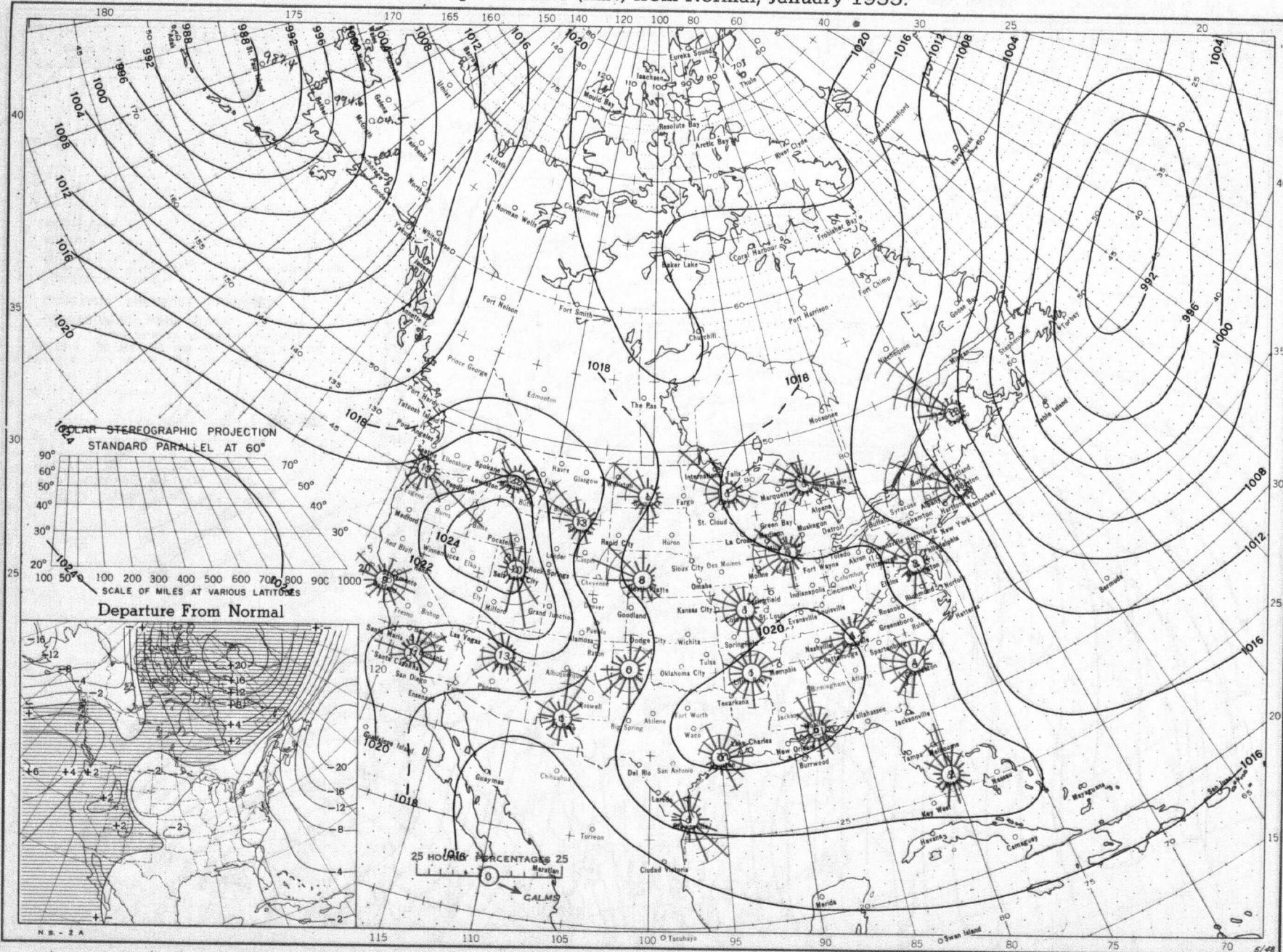
Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Tracks of Centers of Cyclones at Sea Level, January 1955.



Circle indicates position of center at 7:30 a.m. E. S. T. See Chart IX for explanation of symbols.

Chart XI. Average Sea Level Pressure (mb.) and Surface Windroses, January 1955. Inset: Departure of Average Pressure (mb.) from Normal, January 1955.



Average sea level pressures are obtained from the averages of the 7:30 a.m. and 7:30 p.m. E.S.T. readings. Windroses show percentage of time wind blew from 16 compass points or was calm during the month. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid based on readings from the Historical Weather Maps (1899-1939) for the 20 years of most complete data coverage prior to 1940.

Chart XII. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 850-mb. Pressure Surface, Average Temperature in °C. at 850 mb., and Resultant Winds at 1500 Meters (m.s.l.), January 1955.

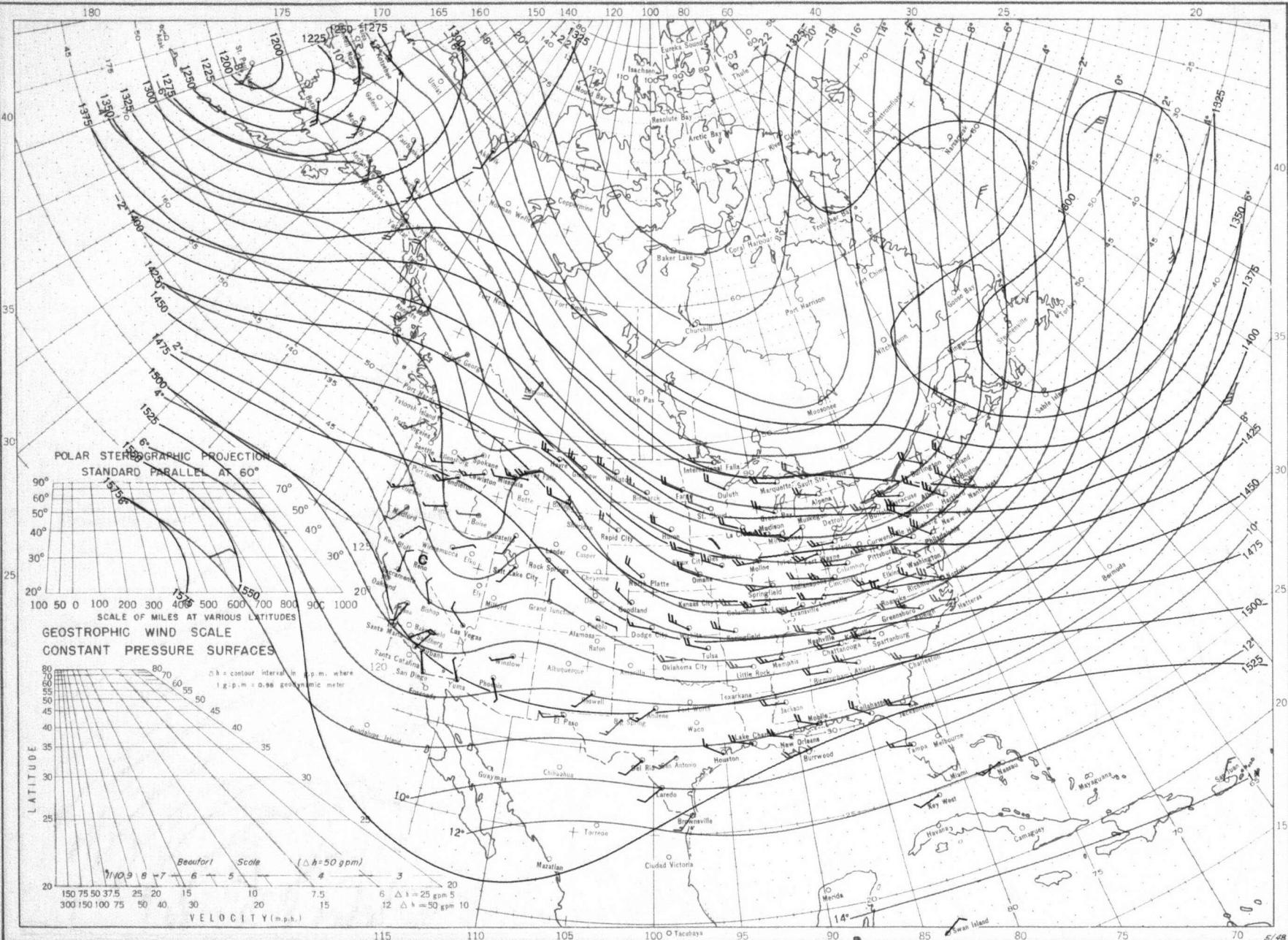
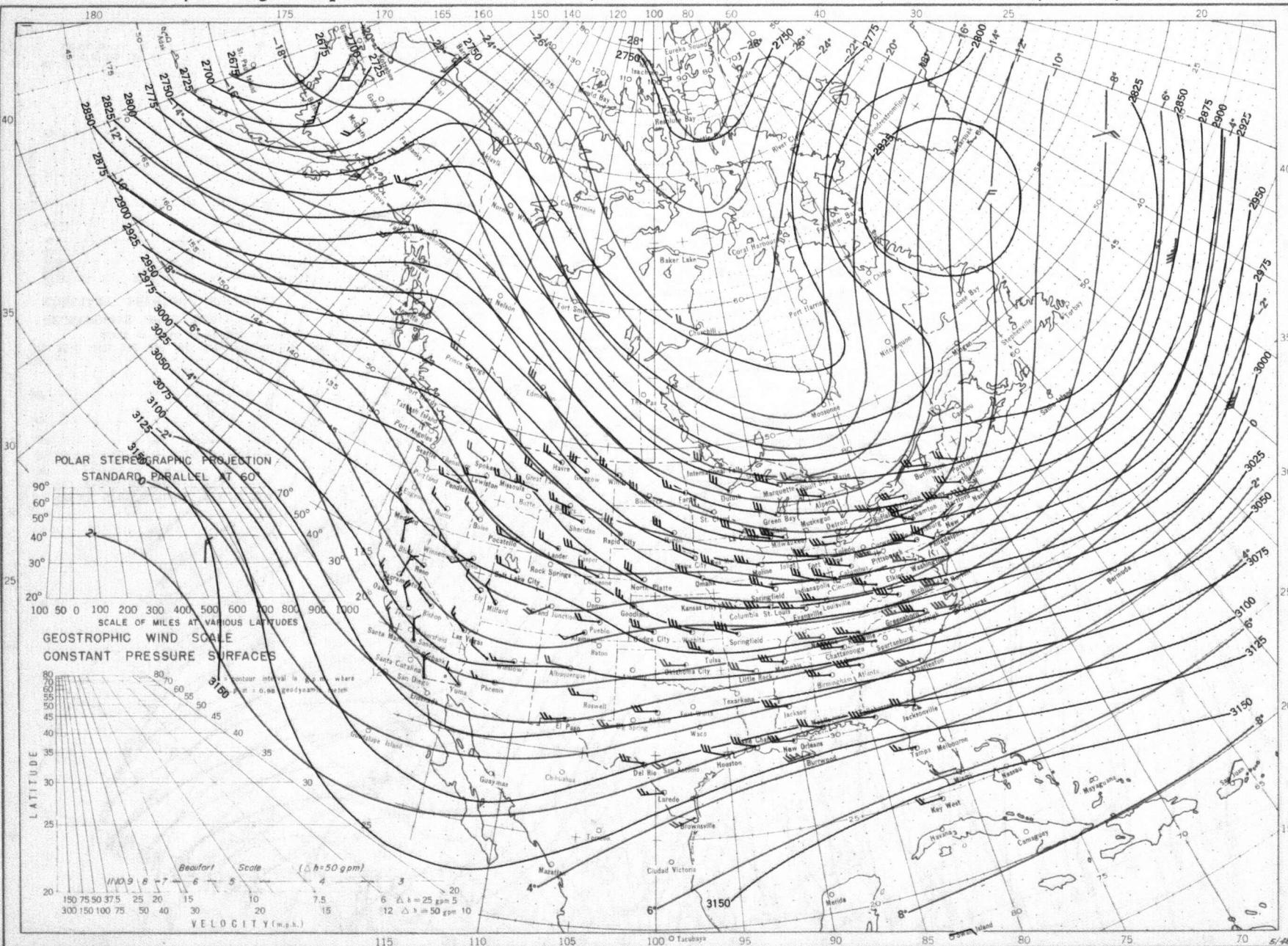
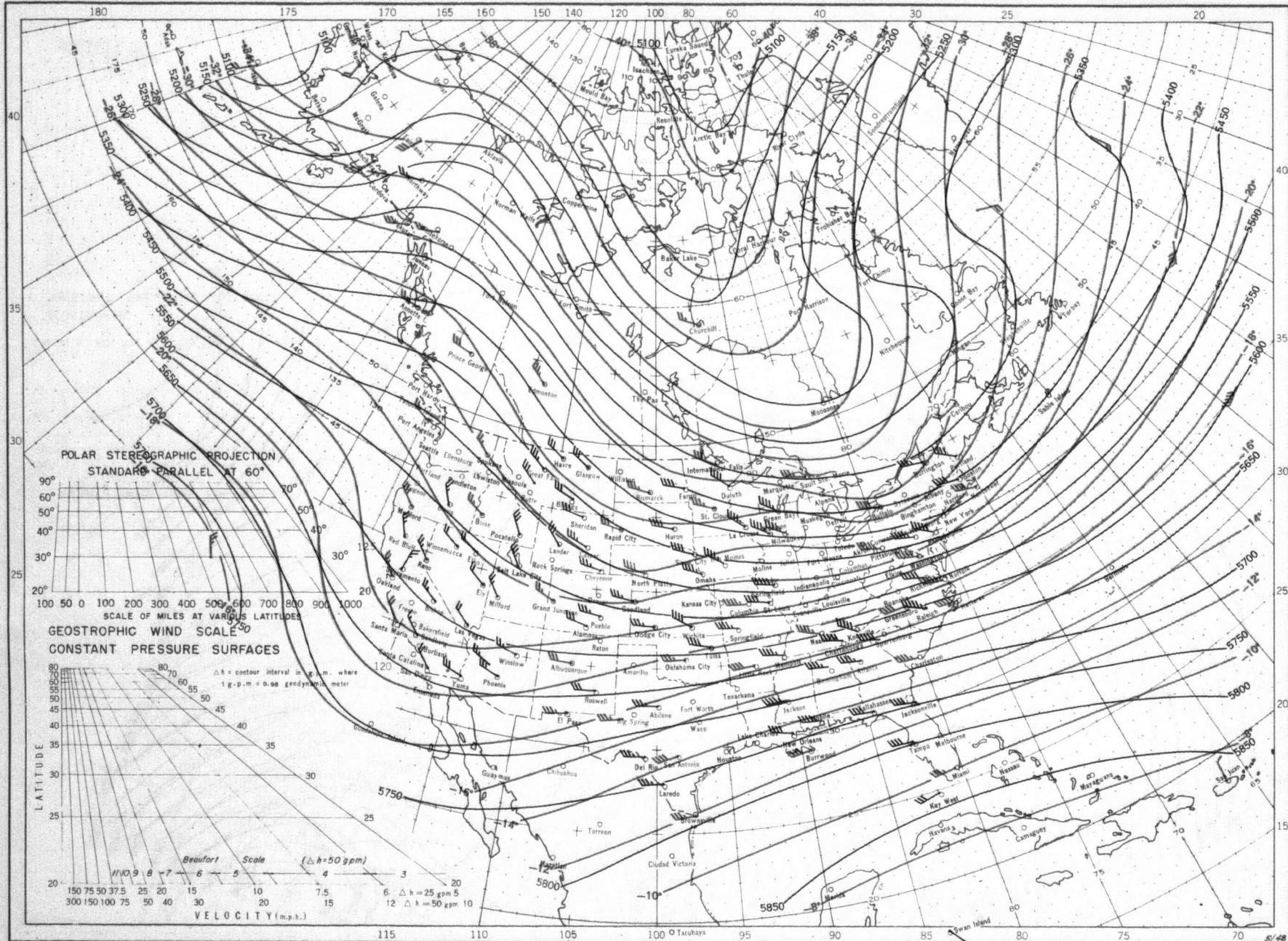


Chart XIII. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 700-mb. Pressure Surface, Average Temperature in °C. at 700 mb., and Resultant Winds at 3000 Meters (m.s.l.), January 1955.



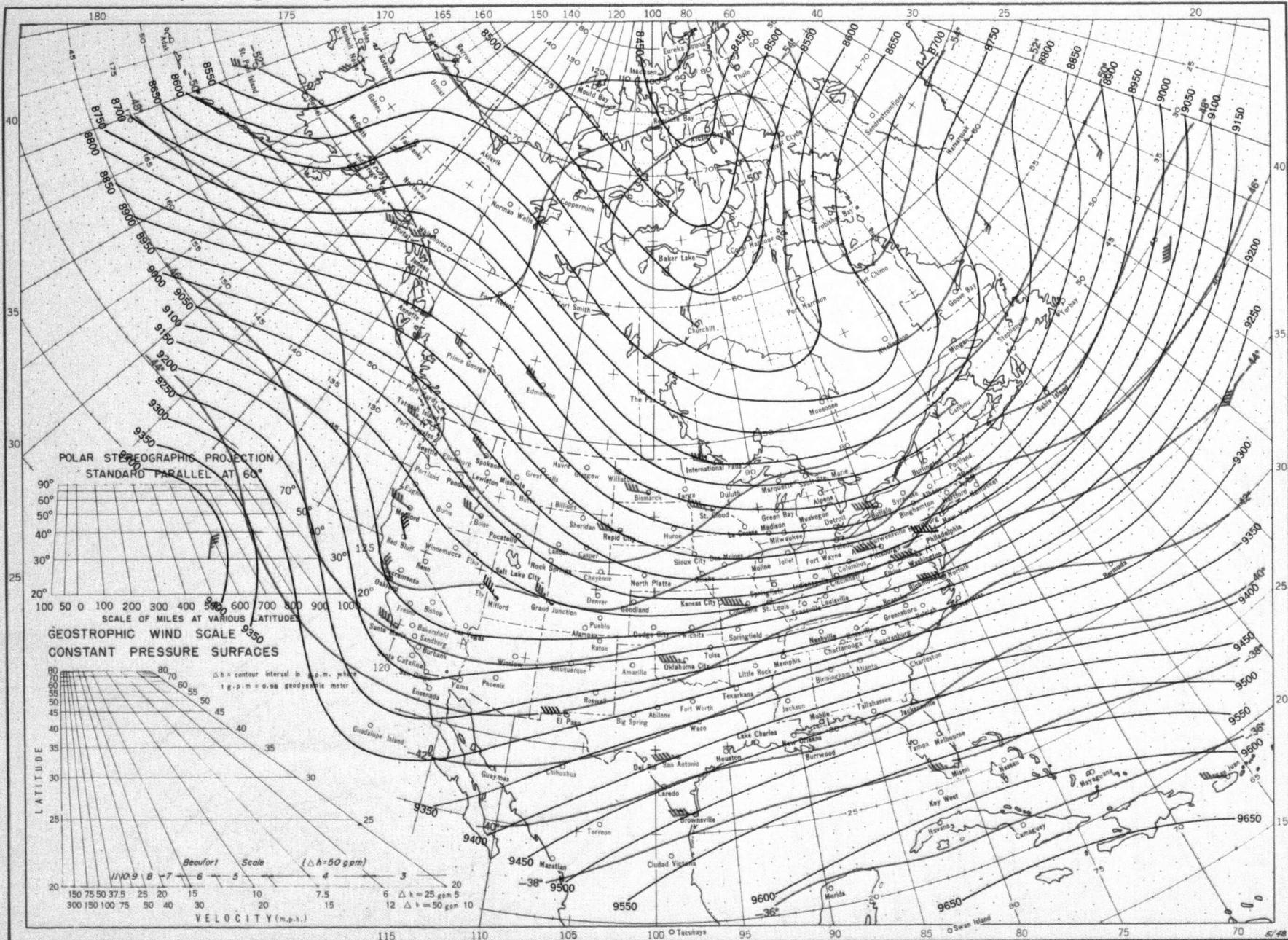
Contour lines and isotherms based on radiosonde observations at 0300 G. M. T. Winds shown in black are based on pilot balloon observations at 2100 G. M. T.; those shown in red are based on rawins taken at 0300 G. M. T. Wind barbs indicate wind speed on the Beaufort scale.

Chart XIV. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 500-mb. Pressure Surface, Average Temperature in °C. at 500 mb., and Resultant Winds at 5000 Meters (m.s.l.), January 1955.



Contour lines and isotherms based on radiosonde observations at 0300 G. M. T. Winds shown in black are based on pilot balloon observations at 2100 G. M. T.; those shown in red are based on rawins at 0300 G. M. T. Wind bars indicate wind speed on the Beaufort scale.

Chart XV. Average Dynamic Height in Geopotential Meters (1 g.p.m. = 0.98 dynamic meters) of the 300-mb. Pressure Surface, Average Temperature in °C. at 300 mb., and Resultant Winds at 10,000 Meters (m.s.l.), January 1955.



Contour lines and isotherms based on radiosonde observations at 0300 G.M.T. Winds shown in black are based on pilot balloon observations at 2100 G.M.T.; those shown in red are based on rawins at 0300 G.M.T. Wind bars indicate wind speed on the Beaufort scale.

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